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PHYSICAL AND CHEMICAL DATA INDOMED EXPEDITION LEG XIII, 9 NOVEM--ETC(U)

NOV 79

N00014-75-C-0L52

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SIO-REF-79-15

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1 OF 2

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data report

PHYSICAL AND CHEMICAL DATA

INDOMED Expedition

Leg XIII

9 November - 22 December 1978

SIO Reference 79-15

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REPORT DOCUMENTATION PAGE

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Indomed Expedition Leg XIII was carried out from 9 November to 22 December 1978 aboard RV <u>Melville</u> to study the characteristics and flow of the abyssal waters of the southern part of the Argentine Basin and the area between the South Sandwich Islands and the mid-Atlantic Ridge. Forty-two hydrographic stations were occupied with sampling to the bottom for temperature, salinity, oxygen, phosphate,...		

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CORRIGENDA

PHYSICAL AND CHEMICAL DATA REPORTS

1. INDOPAC Expedition (SIO Reference 78-21)

Page 172, Station 89

Calcium values should be:

10.09

10.09

10.08

10.06

10.04

9.97

9.94

10.02

10.09

10.11

10.15

10.21

10.18

10.19

10.18

Page 172, Station 93

Calcium values should be:

10.04

10.05

10.02

9.92

9.98

9.96

10.01

10.06

10.12

10.15

10.18

10.18

10.18

10.18

10.18

Page 173, Station 97

Calcium at 358 meters should read 10.048

Page 341, Station STD 77U

Salinity at 2800 meters should read 34.669

2. Climax II Expedition (SIO Reference 75-6)

Page 53, Station A4 18

Fifth depth should read 77 (not 7)

3. Burton ISLAND Expedition (SIO Reference 71-15)

Page 5, Station 11

Latitude should read 19°56.1S (not 19°65.1S)

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PHYSICAL AND CHEMICAL DATA

INDOMED Expedition

Leg XIII, 9 November to 22 December 1978.

15 N00014-75-C-0152

11 NOV 79

12
121

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14 SIO-Reference-79-15

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W. A. Nierenberg, Director

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INTRODUCTION

13 This report presents hydrographic data for Indomed Expedition Leg XIII. Data from Indomed Legs I, XIV, and XV will appear in subsequent reports. Data from Indomed Legs III through VII have been distributed as GOG Publication No. 145 and will be published later in a GEOSECS atlas. No hydrographic data was collected on other legs of Indomed Expedition.

13 Indomed Expedition Leg XIII was carried out from 9 November to 22 December 1978 aboard RV Melville to study the characteristics and flow of the abyssal waters of the southern part of the Argentine Basin and the area between the South Sandwich Islands and the mid-Atlantic Ridge. Forty-two hydrographic stations were occupied with sampling to the bottom for temperature, salinity, oxygen, phosphate, silicate, nitrate and nitrite; CTD's were lowered, weather permitting, on stations where the bottom depth was less than 5400m. Free-vehicle current meters were deployed on 9 stations with 7 being recovered.

13 Leg XIII of Indomed Expedition was sponsored by the Office of Naval Research and the National Science Foundation.

STANDARD PROCEDURES

Hydrographic Cast Data

The observed data have been evaluated using the method described by Klein (1973). This involves consideration of their variation as functions of density or depth and their relations to each other, and comparison with previous or adjacent observations. Vertical sections were also considered in data evaluation.

Temperature was measured using paired deep-sea reversing thermometers and is reported to hundredths of a Celsius degree except for the deepest levels where specially scaled low range thermometers were read and tabulated to thousandths of a degree. Most bottles below 100 meters included unprotected (pressure) thermometers for depth determination.

Water samples were obtained from Nansen bottles hung on the CTD wire in conjunction with CTD lowerings on most stations.

Salinity was determined using a Guildline Autosol (1975) inductive salinometer and a University of Washington (1960) conductive salinometer.

Dissolved oxygen was determined by the Winkler method as modified by Carpenter (1965) using the equipment and procedures outlined by Anderson (1971).

Reactive phosphate was determined using a Hitachi Model 100-10 spectrophotometer by the method of Murphy and Riley (1962) as described by Anderson (1971).

Silicate, nitrite, and nitrate were determined using an automated analyzer consisting of the following components:

Sampler: A. H. Thomas Model 253 Little Dipper with a 20 position sampling rack.

Proportioning Pump: Technicon^R AutoAnalyzer^R II Proportioning pump with air bar.

Detectors: Hitachi Model 100-10 spectrophotometers with flow through cell adaptors.

Recorders: Hitachi Model 056 two pen recorders with felt tip pens.

The procedures used are basically those described in Atlas et.al. (1971).

In-situ Conductivity/Temperature/Depth/Oxygen Recorder (CDTO) Data

A GEOSECS modified version of the Neil Brown type of CDTO was used on the majority of the stations. The oxygen sensor failed during the cruise so no data was processed. The CTD was calibrated by comparisons with data obtained from Nansen bottles placed on the wire during the CTD casts. After the application of corrections based on the Nansen bottles, the CTD data were averaged over 2.5 decibar intervals. Depth was calculated from the pressure, the mean density of the overlaying water column, and the local value of gravity. The CTD temperature and salinity data are tabulated to the

nearest thousandths for all depths in this report.

TABULATED DATA

The time reported is Greenwich Mean Time. For CTD lowerings it is the "start down" time, and for bottle casts it is the time of messenger release. When more than one bottle cast was lowered on a station the messenger times for the first and last casts are given. Multiple casts, excluding the surface cast, are indicated by a letter following the observed depth.

Station positions were based on satellite navigation and are for the messenger time on single cast stations. On multiple cast stations the deep cast messenger time position was used for hydrographic data.

Bottom depths, determined acoustically, have been corrected using Matthews (1939) tables and are reported in meters.

Weather and dominant waves are coded using the National Oceanographic Data Center (NODC) method.

Data from the sample bottle casts and the CTD lowerings are tabulated followed by computer curves of CTD data.

Data from the bottle casts appears for the most part on even numbered pages but a few casts appear on right hand pages. Temperature, salinity and oxygen are interpolated from the observations on the right. Computed values of thermobaric anomaly are included with the observed levels and computed values of sigma-t, thermobaric anomaly and geopotential anomaly are included with the interpolated levels.

Data from the CTD usually appears on the facing odd numbered pages but on some pages the cruise name and CTD notation have been removed and the tabulated data entered on a left or right hand page with the bottle cast data. Temperature and salinity are tabulated at closer standard intervals than in previous reports. Computed values of sigma-t, thermobaric anomaly and geopotential anomaly are included.

Two computer plots of the data for each CTD lowering are included. The upper plot is a curve of potential temperature versus salinity while the lower plot shows profiles of the in-situ temperature and salinity versus depth with the observed sample bottle data plotted for comparison.

The column headings are to be interpreted as follows:

Z	Depth	Meters
T	Temperature	C°
S	Salinity	°/oo
O2	Dissolved Oxygen	ml/L
P04	"Reactive" inorganic phosphate-phosphorus	µg at/L
SI03	"Reactive" inorganic silicate-silicon	µg at/L
N02	"Reactive" inorganic nitrite-nitrogen	µg at/L
N03	"Reactive" inorganic nitrate-nitrogen	µg at/L
DT	δT Thermosteric anomaly	cl/ton
SIGT or SIGMA T	$\sigma_t = (\rho_{s,t,0} - 1)10^3$ where $\rho_{s,t,0}$ is the density the parcel of sea water would have if moved isothermally to the sea surface.	g/L
DD	Geopotential anomaly, referred to the sea surface.	dynamic meters

FOOTNOTES

In addition to footnotes, several special notations are used without footnotes because the meaning is always the same.

A and B: After depth value indicates successively deeper casts on expedition legs which have multiple cast stations. The upper cast originating at or near the surface has no letter following the depth.

K: Both protected thermometers in the sample bottle malfunctioned. The temperature was inferred from the pressure thermometer and wire depth. For this expedition, the values are believed accurate to $\pm 0.05^\circ\text{C}$.

- P: After depth value indicates the Nansen bottles posttripped.
- U: Uncertain value. Values which are not used in interpolation because they seem to be in error without apparent reason. CTD station number indicates the up cast data are being reported.
- V: Because of time differences, overlapping casts show some differences. Values not used in interpolation.

PERSONNEL

Ship's Captain: Phinney, Alan RV MELVILLE

Personnel Participating in the Collection of Data:

Reid, Joseph L. Prof.	Chief Scientist, Professor, SIO
Antezano, Tarsico J. Dr.	Professor Asociado, University of Chile
Charter, James S.	Programmer, SIO
Costello, James P.	Staff Research Associate, SIO
Graham, Jerry B.	Electronics Technician, SIO
Johnson, Frank W.	Marine Technician, SIO
Johnson, Treve L.	Marine Technician, SIO
Mantyla, Arnold W.	Specialist, SIO
Muus, David A.	Staff Research Associate, SIO
Olivera, Ricardo M.	Staff Research Associate, Servicio Hidro- grafía Naval, Argentina
Schmitt, James A.	Electronics Technician, SIO
Sachs, Neal A.	Staff Volunteer, SIO
Stallard, Martha O. Dr.	Staff Research Associate, SIO
Sweet, Paul R.	Marine Technician, SIO
Witherow, Sharon L.	Resident Technician, SIO

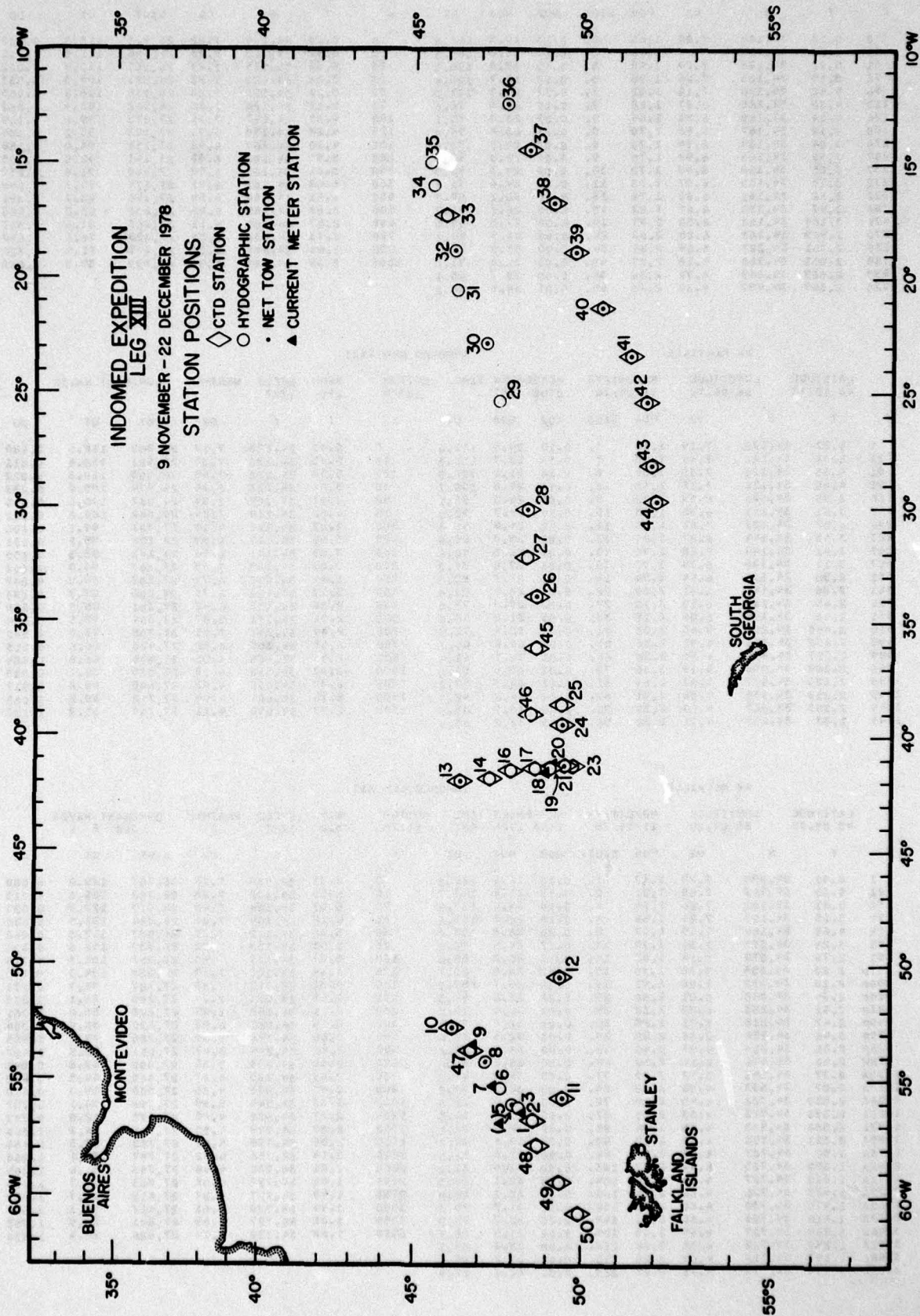


FIGURE 1

RV MELVILLE						INDOMED L&G XIII									
LATITUDE 48 38.2S		LONGITUDE 56 49.9W		MO/DAY/YR 11/14/78		MESSENGER 0146 GMT		TIME	BOTTOM 1093M	WIND 29U	SPEED 15KT	WEATHER 1	DOMINANT WAVES		
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	UT	DD
0	5.53	34.104	7.22	1.49	5.	0.13	19.3	113.8	0	5.53	34.104	7.22	26.925	113.8	0.000
30	5.26	34.123		1.45	5.	0.14	19.8	109.3	10	5.42	34.113	7.23	26.946	111.9	0.011
61	5.21	34.126	7.29	1.45	5.	0.15	19.8	108.5	20	5.33	34.119	7.24	26.961	110.4	0.022
76	5.19	34.125	7.26	1.46	5.	0.12	19.7	108.4	30	5.26	34.123	7.25	26.973	109.3	0.033
96	4.62	34.138	7.10	1.62	7.	0.17	21.5	101.3	50	5.23	34.126	7.28	26.978	108.8	0.055
111	4.30	34.165	6.97	1.68	8.	0.19	23.3	96.0	75	5.19	34.126	7.26	26.982	108.4	0.083
126	4.24	34.169	6.93	1.69	9.	0.09	23.5	95.1	100	4.52	34.147	7.06	27.075	99.6	0.109
150	4.12	34.167	6.96	1.70	9.	0.07	23.8	94.0	125	4.24	34.170	6.93	27.123	95.1	0.134
176	4.04	34.164	6.94	1.70	9.	0.02	24.0	93.4	150	4.12	34.167	6.96	27.134	94.0	0.158
207	3.92	34.160	6.99	1.70	9.	0.01	24.0	92.6	200	3.95	34.162	6.98	27.147	92.8	0.205
237	3.85	34.160	6.99	1.72	10.	0.00	24.3	91.9	250	3.81	34.160	6.99	27.160	91.6	0.252
272	3.75	34.158	6.97	1.73	11.	0.00	24.6	91.1	300	3.68	34.161	6.91	27.174	90.3	0.299
322	3.62	34.161	6.85	1.76	13.	0.01	25.2	89.7	400	3.41	34.156	6.64	27.196	88.2	0.391
386	3.47	34.156	6.67	1.83	15.	0.00	26.2	88.7	500	3.03	34.155	6.46	27.230	85.0	0.480
471	3.104	34.153	6.52	1.97	19.	0.00	27.5	85.6	600	2.87	34.180	6.11	27.265	81.6	0.567
570	2.915	34.165	6.25	2.02	24.	0.00	28.9	83.1	700	2.73	34.238	5.59	27.323	76.1	0.650
680	2.761	34.227	5.69	2.21	34.	0.00	31.0	77.1	800	2.65	34.297	5.13	27.377	71.0	0.728
789	2.651	34.288	5.18	2.27	43.	0.00	32.6	71.6	1000	2.59	34.444	4.36	27.499	59.5	0.868
899	2.669	34.369	4.72	2.34	54.	0.00	33.7	65.6							
1020	2.569	34.457	4.30	2.45	65.	0.01	34.6	58.2							

RV MELVILLE						INDOMED LEG XIII									
LATITUDE 48 15.4S		LONGITUDE 56 06.9W		MO/DAY/YR 11/14/78		MESSENGER 0755 GMT		TIME	BOTTOM 1877M	WIND 27U	SPEED 17KT	WEATHER	DOMINANT WAVES		
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	UT	DD
1	5.37	34.123	7.19	1.50	7.	0.15	20.5	110.6	0	5.37	34.123	7.19	26.960	110.6	0.000
21	5.33	34.121	7.49	1.48	7.	0.16	20.7	110.3	10	5.35	34.123	7.37	26.961	110.4	0.011
51	4.95	34.123	7.33	1.54	8.	0.16	21.2	105.9	20	5.33	34.122	7.48	26.963	110.3	0.022
91	4.40	34.116	7.18	1.65	8.	0.18	22.8	100.7	30	5.24	34.123	7.44	26.974	109.2	0.033
126	3.95	34.131	6.99	1.72	9.	0.09	24.3	95.1	50	4.97	34.124	7.34	27.007	106.1	0.055
157	3.81	34.141	6.95	1.73	10.	0.04	24.7	93.0	75	4.62	34.119	7.24	27.042	102.8	0.081
192	3.57	34.133	7.14	1.73	10.	0.02	24.6	91.3	100	4.27	34.120	7.13	27.081	99.1	0.106
227	3.45	34.141	6.87	1.84	13.	0.02	25.8	89.6	125	3.96	34.132	6.99	27.122	95.2	0.131
267	3.41	34.149	6.68	1.90	15.	0.01	26.5	88.6	150	3.83	34.141	6.96	27.142	93.3	0.155
307	3.11	34.136	6.75	1.93	16.	0.01	27.0	87.0	200	3.53	34.135	7.09	27.167	90.9	0.202
351	2.90	34.131	6.64	1.94	18.	0.01	27.7	85.5	250	3.44	34.148	6.74	27.187	89.0	0.247
401	2.86	34.149	6.41	2.00	22.	0.01	28.5	83.8	300	3.17	34.140	6.73	27.206	87.3	0.293
461	2.65	34.180	6.10	2.10	27.	0.02	29.8	79.8	400	2.86	34.150	6.42	27.241	83.9	0.380
531	2.43	34.199	5.86	2.18	33.	0.01	31.0	76.6	500	2.51	34.191	5.97	27.304	77.9	0.464
610	2.440	34.254	5.45	2.33	41.	0.01	32.4	72.5	600	2.44	34.247	5.51	27.355	73.0	0.542
699	2.652	34.353	4.82	2.36	51.	0.01	33.8	66.7	700	2.65	34.355	4.82	27.423	66.6	0.615
809	2.507	34.408	4.54	2.50	60.	0.01	34.4	61.4	800	2.53	34.406	4.55	27.475	61.8	0.684
968	2.380	34.498	4.19	2.46	72.	0.01	35.0	53.5	1000	2.37	34.515	4.15	27.575	52.2	0.808
1146	2.328	34.577	4.03	2.44	81.	0.01	34.7	47.2	1200	2.30	34.596	4.02	27.645	45.6	0.917
1345	2.213	34.632	4.00	2.41	87.	0.02	34.2	42.1	1500	2.13	34.661	4.04	27.712	39.3	1.065
1544	2.101	34.667	4.06	2.34	92.	0.00	33.7	38.6	1750	1.97	34.690	4.11	27.748	35.9	1.177
1743	1.97	34.689	4.11	2.32	96.	0.00	33.2	35.9							

RV MELVILLE						INDOMED LEG XIII									
LATITUDE 48 04.8S		LONGITUDE 56 07.2W		MO/DAY/YR 11/14/78		MESSENGER 1443 1726		TIME GMT	BOTTOM 3917M	WIND 31U	SPEED 17KT	WEATHER 1	DOMINANT WAVES 310 2 4		
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	DT	DD
1	6.81	34.099	7.23	1.17	1.	0.18	16.0	129.8	0	6.81	34.099	7.23	26.757	129.8	0.000
21	6.35	34.103	7.48	1.21	2.	0.19	16.2	123.7	10	6.59	34.102	7.38	26.788	126.8	0.013
51	5.81	34.101	7.26	1.28	4.	0.18	18.6	117.3	20	6.37	34.104	7.48	26.819	123.9	0.025
91	5.15	34.103	7.20	1.56	6.	0.19	20.6	109.6	30	6.18	34.104	7.44	26.844	121.5	0.038
126	4.62	34.104	7.19	1.67	8.	0.20	22.3	103.8	50	5.83	34.102	7.27	26.887	117.5	0.062
156	3.24	34.077	7.36	1.79	12.	0.27	24.6	92.6	75	5.41	34.103	7.22	26.939	112.6	0.091
191	2.76	34.072	7.26	1.82	14.	0.11	25.7	88.8	100	5.07	34.107	7.20	26.982	108.5	0.119
247P	2.23	34.058	7.30	1.90	15.	0.02	26.5	85.7	125	4.64	34.105	7.19	27.028	104.0	0.145
280P	2.10	34.052	7.00	1.91	16.	0.02	26.7	85.2	150	3.51	34.082	7.33	27.127	94.7	0.171
334P	2.34	34.088	6.81	2.00	20.	0.02	28.0	84.3	200	2.65	34.071	7.27	27.196	88.1	0.217
406P	2.61	34.183	6.02	2.12	29.	0.01	30.1	79.2	250	2.21	34.058	7.27	27.223	85.6	0.261
449P	2.47	34.215	5.71	2.25	35.	0.01	31.4	75.7	300	2.16	34.061	6.93	27.230	85.0	0.304
529P	2.46	34.254	5.36	2.30	40.	0.01	32.3	72.6	400	2.60	34.176	6.09	27.285	79.7	0.388
622P	2.51	34.313	4.97	2.46	48.	0.00	33.4	68.6	500	2.46	34.244	5.47	27.351	73.5	0.467
872P	2.43	34.476	4.18	2.52	69.	0.00	35.2	55.6	600	2.50	34.299	5.06	27.392	69.6	0.541
1015A	2.37	34.551	3.98	2.42	77.	0.00	34.9	49.5	700	2.49	34.365	4.67	27.445	64.5	0.612
1210A	2.27	34.633	4.05	2.39	84.	0.00	34.3	42.5	800	2.45	34.430	4.36	27.500	59.3	0.678
1406A	2.550	34.722	4.45	2.19	92.	0.00	31.5	38.0	1000	2.38	34.544	3.99	27.598	50.1	0.797
1600A	2.593	34.773	4.63	2.04	67.	0.00	29.5	34.5	1200	2.27	34.630	4.05	27.675	42.8	0.902
1793A	2.582	34.803	4.85	1.94	64.	0.00	28.0	32.1	1500	2.37	34.749	4.55	27.745	36.1	1.043
1985A	2.161	34.758	4.52	2.12	83.	0.00	30.4	32.2	1750	2.58	34.798	4.82	27.783	32.5	1.154
2175A	1.90	34.737	4.49	2.21	94.	0.00	31.6	31.8	2000	2.14	34.756	4.52	27.787	32.1	1.260
2362A	1.698	34.725	4.44	2.27	103.	0.00	32.4	31.2	2250	1.81	34.732	4.46	27.793	31.6	1.364
2547A	1.610	34.727	4.50	2.26	104.	0.00	32.1	30.5	2500	1.63	34.727	4.48	27.803	30.7	1.464
2727A	1.499	34.726	4.56	2.29	108.	0.00	32.1	29.8	2750	1.49	34.727	4.57	27.813	29.7	1.562
2905A	1.470	34.730	4.60	2.23	108.	0.00	31.9	29.3	3000	1.44	34.728	4.61	27.817	29.3	1.659
3078A	1.416	34.725	4.62	2.31	109.	0.00	32.2	29.3	3250	1.38	34.727	4.69	27.821	28.9	1.755
3246A	1.384	34.727	4.69	2.25	109.	0.00	31.9	28.9	3500	1.23	34.720	4.70	27.826	28.4	1.850
3411A	1.272	34.722	4.72	2.26	113.	0.00	32.2	28.5							
3568A	1.197	34.718	4.69	2.26	115.	0.00	32.2	28.3							
5683A	1.144	34.719	4.78	2.25	115.	0.00	32.2	27.9							

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	INDOMED LEG XIII CTD	
48 38.2S	56 49.9W	11/14/78	0057 GMT		
Z	T	S	SIGMA T	DT	
				DO	
0	5.547	34.108	26.927	113.7	0.000
10	5.485	34.107	26.933	113.1	0.011
20	5.255	34.111	26.964	110.2	0.023
30	5.242	34.112	26.966	109.9	0.034
40	5.230	34.112	26.968	109.6	0.045
50	5.223	34.112	26.968	109.7	0.056
75	5.179	34.113	26.974	109.2	0.083
100	4.405	34.142	27.084	98.8	0.109
125	4.212	34.159	27.118	95.5	0.134
150	4.161	34.159	27.124	95.0	0.158
175	4.068	34.157	27.132	94.2	0.182
200	3.982	34.156	27.141	93.3	0.206
225	3.885	34.153	27.148	92.8	0.230
250	3.803	34.153	27.156	92.0	0.253
275	3.733	34.151	27.161	91.5	0.277
300	3.660	34.151	27.168	90.8	0.300
350	3.480	34.144	27.180	89.7	0.346
400	3.377	34.152	27.196	88.1	0.392
450	3.208	34.152	27.212	86.6	0.438
500	3.113	34.153	27.222	85.7	0.482
550	3.000	34.158	27.236	84.4	0.526
600	2.956	34.176	27.254	82.6	0.570
650	2.946	34.213	27.285	79.7	0.613
700	2.758	34.240	27.315	76.9	0.654
750	2.762	34.269	27.346	74.0	0.694
800	2.666	34.286	27.368	71.9	0.732
850	2.705	34.322	27.393	69.5	0.770
900	2.679	34.350	27.418	67.2	0.807
950	2.655	34.387	27.449	64.2	0.842
1000	2.604	34.442	27.489	60.3	0.876
1030	2.579	34.450	27.506	58.8	0.896

RV MELVILLE						INCOMED LAG XIII									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
47 38.8S		55 04.5W		11/15/78		0100 0741		GMT	5260M	U	14KT	1			
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	DT	DD
0	6.33	34.098	7.60	1.20	3.	0.18	16.9	123.8	0	6.33	34.098	7.60	26.820	123.8	0.000
20	5.89	34.088	7.54	1.34	4.	0.17	19.0	119.2	10	6.12	34.092	7.58	26.842	121.7	0.012
51	5.10	34.106	7.33	1.54	8.	0.16	21.6	108.8	20	5.89	34.088	7.54	26.869	119.2	0.024
81	4.23	34.108	7.28	1.66	9.	0.22	23.1	99.5	30	5.65	34.094	7.47	26.902	116.0	0.036
102	3.69	34.105	7.30	1.73	10.	0.31	24.2	94.5	50	5.13	34.106	7.34	26.974	109.2	0.059
127	3.41	34.104	7.23	1.75	11.	0.09	25.0	92.0	75	4.40	34.109	7.29	27.058	101.3	0.085
157	3.39	34.133	7.10	1.76	11.	0.05	25.2	89.7	100	3.73	34.106	7.30	27.124	94.9	0.110
192	3.14	34.119	7.07	1.80	13.	0.03	25.8	88.5	125	3.42	34.105	7.24	27.154	92.2	0.134
226	2.90	34.108	7.07	1.87	15.	0.02	26.6	87.3	150	3.39	34.129	7.13	27.175	90.1	0.157
266	2.73	34.110	6.91	1.89	17.	0.02	27.1	85.7	200	3.08	34.117	7.07	27.195	88.2	0.202
306	2.73	34.126	6.69	1.94	20.	0.02	28.1	84.5	250	2.78	34.109	6.99	27.216	86.3	0.246
351	2.76	34.156	6.30	2.04	23.	0.02	29.1	82.5	300	2.73	34.124	6.73	27.233	84.7	0.290
401	2.607	34.173	6.15	2.08	27.	0.01	30.0	79.9	400	2.61	34.174	6.15	27.282	80.0	0.374
460	2.391	34.206	5.83	2.17	34.	0.02	31.6	75.7	500	2.27	34.224	5.69	27.351	73.4	0.453
530	2.215	34.239	5.57	2.27	40.	0.01	32.5	71.9	600	2.36	34.307	4.97	27.409	67.9	0.526
615A	2.41	34.322	4.84	2.26	50.	0.01	33.8	67.1	700	2.45	34.385	4.62	27.465	62.7	0.595
699	2.452	34.384	4.62	2.41	58.	0.02	34.9	62.7	800	2.48	34.463	4.29	27.525	57.0	0.659
815A	2.48	34.474	4.24	2.43	69.	0.00	35.1	56.2	1000	2.35	34.566	4.07	27.617	48.3	0.774
1012A	2.34	34.569	4.06	2.49	76.	0.00	34.9	47.9	1200	2.57	34.678	4.27	27.688	41.5	0.876
1258A	2.64	34.705	4.35	2.15	68.	0.01	31.5	40.0	1500	2.28	34.713	4.28	27.740	36.6	1.016
1534B	2.23	34.711	4.28	2.22	84.	0.00	32.3	36.3	1750	2.88	34.777	4.68	27.783	32.5	1.125
1781B	2.41	34.787	4.75	1.97	71.	0.01	29.0	31.9	2000	2.41	34.821	5.07	27.816	29.4	1.228
2029B	2.41	34.824	5.09	1.82	65.	0.01	27.3	29.1	2250	2.14	34.804	4.96	27.825	28.5	1.329
2276B	2.10	34.801	4.94	1.94	76.	0.01	28.1	28.4	2500	1.69	34.754	4.69	27.821	28.9	1.426
2523B	1.65	34.750	4.67	2.13	98.	0.01	30.9	29.0	2750	1.43	34.741	4.70	27.828	28.2	1.520
2771B	1.418	34.740	4.70	2.22	106.	0.01	31.6	28.1	3000	1.21	34.731	4.73	27.836	27.4	1.610
3018B	1.190	34.730	4.73	2.23	113.	0.01	32.2	27.4	3250	1.03	34.716	4.81	27.837	27.4	1.697
3264B	1.017	34.715	4.82	2.24	119.	0.00	32.6	27.4	3500	0.85	34.711	4.91	27.844	26.8	1.780
3511B	0.838	34.710	4.91	2.29	122.	0.01	32.6	26.7	3750	0.62	34.698	5.00	27.848	26.4	1.859
3757B	0.610	34.697	5.00	2.29	126.	0.01	33.0	26.4	4000	0.44	34.689	5.10	27.851	26.1	1.933
4003B	0.441	34.688	5.10	2.31	129.	0.01	33.2	26.1	4250	0.34	34.683	5.14	27.853	25.9	2.003
4250B	0.336	34.683	5.14	2.34	131.	0.01	33.3	25.9	4500	0.27	34.680	5.19	27.853	25.9	2.070
4496B	0.274	34.679	5.19	2.38	131.	0.01	33.5	25.9	4750	0.24	34.678	5.18	27.853	25.9	2.137
4741B	0.243	34.677	5.18	2.39	132.	0.01	33.4	25.9	5000	0.24	34.677	5.25	27.853	25.9	2.203
4986B	0.238	34.676	5.25	2.38	133.	0.02	33.6	25.9							
5182B	0.235	34.674	5.23	2.31	132.	0.04	33.5	26.1							

RV MELVILLE										INCOMED LLG XIII									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
47 16.9S		54 09.8W		11/15/78		1604 1917		GMT		5902M		340		17KT		1		340 4 5	
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	S10T	DT	DD				
0	10.79	34.547	6.55	0.60	0.	0.14	6.8	156.0	0	10.79	34.547	6.55	26.480	156.0	0.000				
15	10.74	34.551	6.60	0.58	0.	0.15	6.7	154.9	10	10.77	34.550	6.59	26.486	155.5	0.016				
30	10.60	34.561	6.62	0.59	0.	0.15	6.8	151.8	20	10.69	34.551	6.61	26.502	154.0	0.031				
55	10.88	34.716	6.40	0.61	0.	0.17	6.6	145.1	30	10.60	34.561	6.62	26.525	151.8	0.046				
70	10.75	34.732	6.33	0.68	0.	0.20	7.5	141.7	50	10.82	34.685	6.45	26.581	146.4	0.076				
85	8.68	34.550	6.24	1.12	2.	0.13	15.2	122.2	75	10.14	34.679	6.29	26.697	135.4	0.112				
101	7.06	34.354	6.43	1.34	4.	0.17	18.1	114.0	100	7.14	34.365	6.42	26.920	114.3	0.144				
126	6.09	34.279	6.37	1.52	5.	0.11	20.9	107.3	125	6.11	34.280	6.37	26.992	107.5	0.172				
151	5.24	34.239	6.20	1.69	8.	0.05	24.2	100.4	150	5.27	34.241	6.21	27.064	100.6	0.198				
175	5.05	34.233	6.17	1.72	9.	0.03	24.8	98.8	200	4.69	34.207	6.31	27.104	96.9	0.249				
211	4.52	34.193	6.38	1.75	10.	0.01	25.3	96.1	250	4.25	34.182	6.43	27.132	94.2	0.297				
275	4.15	34.181	6.47	1.79	12.	0.01	25.8	93.3	300	4.06	34.186	6.40	27.154	92.1	0.345				
370	3.77	34.191	6.20	1.90	16.	0.01	27.7	88.8	400	3.50	34.177	6.25	27.204	87.4	0.438				
471	2.86	34.147	6.37	2.01	22.	0.01	28.8	84.0	500	2.72	34.151	6.32	27.254	82.7	0.526				
589	2.52	34.183	5.99	2.17	29.	0.01	30.6	78.5	600	2.52	34.192	5.93	27.304	77.9	0.609				
708	2.35	34.267	5.29	2.31	41.	0.01	32.9	72.4	700	2.35	34.262	5.34	27.358	72.8	0.688				
826	2.63	34.351	4.80	2.41	51.	0.01	34.0	66.7	800	2.62	34.334	4.90	27.409	68.0	0.763				
879A	2.60	34.387	4.56	2.40	56.	0.00	34.8	63.7	1000	2.48	34.441	4.33	27.506	58.7	0.899				
976	2.50	34.425	4.59	2.47	62.	0.00	35.3	60.0	1200	2.62	34.582	4.14	27.607	49.2	1.020				
1053A	2.47	34.479	4.21	2.46	68.	0.00	35.6	55.7	1500	2.60	34.667	4.28	27.693	41.1	1.180				
1227A	2.65	34.597	4.13	2.38	68.	0.00	34.0	48.2	1750	2.50	34.741	4.41	27.744	36.1	1.300				
1425A	2.62	34.666	4.24	2.26	71.	0.00	32.8	42.8	2000	2.49	34.792	4.73	27.786	32.2	1.413				
1649A	2.542	34.720	4.36	2.16	75.	0.01	31.5	38.1	2250	2.30	34.799	4.84	27.808	30.2	1.520				
1873A	2.46	34.765	4.51	2.02	72.	0.01	30.1	34.0	2500	1.80	34.747	4.56	27.806	30.3	1.623				
2096A	2.51	34.808	4.88	1.91	66.	0.01	27.9	31.1	2750	1.55	34.740	4.61	27.819	29.2	1.722				
2319A	2.17	34.788	4.82	2.00	77.	0.01	29.0	30.0	3000	1.35	34.736	4.67	27.830	28.0	1.816				
2543A	1.72	34.738	4.51	2.17	99.	0.00	31.9	30.4	3250	1.14	34.722	4.75	27.834	27.1	1.906				
2766A	1.54	34.739	4.62	2.20	105.	0.01	31.9	29.1	3500	0.94	34.717	4.83	27.843	26.8	1.992				
2990A	1.357	34.736	4.67	2.18	108.	0.01	31.7	28.0	3750	0.76	34.708	4.86	27.847	26.4	2.074				
3214A	1.169	34.723	4.73	2.21	104.	0.03	32.2	27.8	4000	0.57	34.692	5.00	27.846	26.6	2.151				
3436A	0.99	34.717	4.84	2.27	120.	0.01	32.7	27.1	4250	0.41	34.683	5.07	27.848	26.4	2.225				
3660A	0.826	34.716	4.81	2.23	123.	0.03	32.9	26.2	4500	0.32	34.678	5.12	27.849	26.3	2.295				
3883A	0.667	34.695	4.95	2.28	125.	0.02	33.0	26.8	4750	0.27	34.680	5.17	27.854	25.8	2.363				
4106A	0.489	34.688	5.04	2.30	128.	0.02	33.2	26.4	5000	0.25	34.672	5.19	27.868	26.4	2.431				
4330A	0.378	34.68	5.08	2.31	130.	0.02	33.4	26.4	5250	0.25	34.672	5.18	27.868	26.3	2.496				
4552A	0.308	34.677	5.13	2.36	131.	0.02	33.5	26.2	5500	0.26	34.673	5.20	27.868	26.3	2.566				
4775A	0.269	34.68	5.17	2.36	131.	0.02	33.3	25.8	5750	0.28	34.671	5.21	27.866	26.6	2.634				
4998A	0.251	34.671	5.19	2.35	130.	0.00	33.6	26.4											
5222A	0.249	34.671	5.18	2.32	131.	0.00	33.7	26.4											
5444A	0.258	34.673	5.19	2.30	131.	0.00	33.6	26.2											
5666A	0.274	34.670	5.22	2.33	132.	0.00	33.6	26.6											
5889A	0.294	34.671	5.19	2.31	131.	0.02	33.6	26.6											

RV MELVILLE

INDOMED LEG XIII

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	LATITUDE 46 18.0S	LONGITUDE 52 01.0W	MO/DAY/YR 11/16/78	MESSENGER 0725 1145	TIME GMT	BOTTOM 6060M	WIND 340	SPEED 12KT	WEATHER 1	DOMINANT WAVES 340 5 5					
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	DT	DD
0	10.81	34.758	6.38	0.62	0.	0.15	6.6	140.8	0	10.81	34.758	6.38	26.641	140.8	0.000
20	10.80	34.756	6.36	0.62	0.	0.16	6.6	140.8	10	10.81	34.757	6.37	26.641	140.8	0.014
31	10.78	34.753	6.34	0.68	0.	0.17	6.7	140.6	20	10.80	34.756	6.36	26.641	140.8	0.028
56	10.74	34.778	6.27	0.63	0.	0.18	6.8	138.1	30	10.78	34.753	6.34	26.642	140.6	0.042
71	10.33	34.743	6.14	0.77	1.	0.19	9.4	133.8	50	10.75	34.767	6.30	26.658	139.1	0.070
87	9.15	34.614	6.03	1.06	2.	0.05	14.1	124.5	75	10.00	34.702	6.11	26.739	131.5	0.105
102	9.46	34.736	5.87	1.08	3.	0.03	14.7	120.3	100	9.39	34.717	5.89	26.853	120.7	0.137
127	8.96	34.662	6.02	1.10	3.	0.03	15.1	118.1	125	9.03	34.676	6.00	26.879	118.1	0.167
153	8.24	34.551	6.01	1.22	3.	0.03	17.0	115.6	150	8.43	34.566	6.01	26.902	116.0	0.197
178	7.42	34.450	5.90	1.37	5.	0.03	20.0	111.7	200	7.22	34.454	5.80	26.979	108.7	0.255
214	7.14	34.462	5.76	1.44	6.	0.04	21.9	107.0	250	6.19	34.350	5.89	27.037	103.2	0.309
280	5.30	34.245	6.08	1.70	9.	0.02	25.4	100.6	300	4.99	34.220	6.17	27.080	99.1	0.362
377	4.279	34.182	6.43	1.77	11.	0.03	26.5	94.5	400	4.12	34.175	6.42	27.140	95.4	0.461
479	3.723	34.164	6.37	1.89	14.	0.02	28.5	90.5	500	3.67	34.168	6.33	27.180	89.7	0.557
601	3.464	34.189	6.08	1.98	20.	0.02	29.8	86.1	600	3.47	34.190	6.08	27.217	86.2	0.649
723	3.041	34.205	5.87	2.06	27.	0.02	31.3	81.2	700	3.12	34.202	5.91	27.260	82.1	0.738
844	2.924	34.242	5.48	2.18	33.	0.02	32.8	77.4	800	2.95	34.228	5.63	27.295	78.8	0.823
995	2.76	34.312	4.97	2.31	44.	0.02	34.8	70.7	1000	2.76	34.315	4.96	27.382	70.5	0.983
1081A	2.74	34.358	4.78	2.29	50.	0.00	33.6	67.0	1200	2.71	34.420	4.51	27.471	62.1	1.129
1263	2.688	34.452	4.38	2.41	61.	0.02	36.1	59.5	1500	2.83	34.604	4.27	27.605	49.4	1.321
1377A	2.53	34.497	4.18	2.43	72.	0.00	35.4	54.8	1750	2.60	34.657	4.18	27.669	43.4	1.462
1527A	2.90	34.624	4.30	2.25	62.	0.00	32.5	48.3	2000	2.57	34.715	4.36	27.718	38.7	1.593
1674A	2.622	34.633	4.16	2.31	74.	0.00	33.2	45.3	2250	2.59	34.777	4.65	27.765	34.1	1.715
1822A	2.58	34.676	4.23	2.20	75.	0.01	32.5	41.7	2500	2.89	34.783	4.71	27.788	32.1	1.832
1972A	2.54	34.701	4.30	2.22	77.	0.00	31.9	39.5	2750	2.16	34.782	4.74	27.806	30.3	1.943
2119A	2.69	34.770	4.61	2.03	67.	0.00	29.4	35.5	3000	1.93	34.779	4.81	27.822	28.7	2.050
2268A	2.57	34.777	4.66	2.03	70.	0.00	29.2	34.0	3250	1.54	34.745	4.62	27.823	28.7	2.152
2465A	2.43	34.784	4.72	2.02	73.	0.02	28.9	32.3	3500	1.25	34.720	4.70	27.825	28.6	2.248
2661A	2.22	34.780	4.69	2.05	80.	0.00	29.4	31.0	3750	1.02	34.712	4.79	27.833	27.7	2.340
2860A	2.08	34.785	4.81	2.01	82.	0.01	29.0	29.5	4000	0.80	34.702	4.87	27.840	27.2	2.425
3057A	1.86	34.776	4.81	2.06	91.	0.00	29.8	28.5	4250	0.59	34.689	5.01	27.842	26.9	2.506
3255A	1.536	34.743	4.62	2.21	106.	0.01	31.7	28.7	4500	0.46	34.685	5.10	27.846	26.5	2.581
3452A	1.30	34.722	4.68	2.26	114.	0.01	32.3	28.7	4750	0.35	34.678	5.15	27.847	26.4	2.653
3698A	1.065	34.713	4.78	2.26	119.	0.01	32.4	27.9	5000	0.29	34.673	5.18	27.847	26.5	2.723
3945A	0.856	34.705	4.84	2.36	123.	0.01	32.8	27.2	5250	0.28	34.673	5.17	27.848	26.4	2.792
4190A	0.693	34.690	4.89	2.34	127.	0.01	33.1	27.0	5500	0.28	34.673	5.19	27.847	26.4	2.860
4437A	0.494	34.686	5.09	2.49U	131.	0.01	33.2	26.5	5750	0.29	34.670	5.24	27.844	26.7	2.930
4683A	0.373	34.679	5.13	2.38	133.	0.02	33.4	26.4	6000	0.30	34.669	5.21	27.843	26.9	3.000
4930A	0.304	34.673	5.18	2.36	133.	0.00	33.4	26.5							
5175A	0.276	34.672	5.17	2.37	133.	0.01	33.5	26.4							
5421A	0.275	34.673	5.17	2.36	134.	0.01	33.4	26.3							
5715A	0.289	34.669	5.24	2.38	134.	0.00	33.6	26.7							
6009A	0.303	34.668	5.21					26.9							

RV MELVILLE

INDOMED LEG XIII

11

	LATITUDE 49 33.9S	LONGITUDE 55 08.7W	MO/DAY/YR 11/17/78	MESSENGER 1709 GMT	TIME GMT	BOTTOM 770M	WIND 300	SPEED 12KT	WEATHER 2	DOMINANT WAVES 340 3 6					
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	DT	DD
1	6.15	34.103	7.31	1.21	3.	0.15	18.3	121.2	0	6.15	34.103	7.31	26.848	121.2	0.000
6	6.16	34.101	7.36	1.22	3.	0.15	18.5	121.5	10	6.11	34.103	7.37	26.852	120.8	0.012
31	5.68	34.111	7.40	1.61U	1.	0.13	18.9	115.0	20	5.93	34.106	7.38	26.877	118.4	0.024
57	5.41	34.109	7.36	1.35	4.	0.11	19.1	112.1	30	5.71	34.111	7.40	26.909	115.4	0.036
77	5.29	34.103	7.34	1.33	4.	0.11	19.0	111.2	50	5.46	34.112	7.37	26.938	112.6	0.059
98	4.70	34.124	7.14	1.59	7.	0.12	21.6	103.2	75	5.31	34.106	7.34	26.952	111.3	0.087
123	4.37	34.138	7.00	1.63	9.	0.11	23.3	98.7	100	4.66	34.126	7.12	27.043	102.7	0.114
154	4.14	34.150	7.11	1.67	10.	0.25	23.5	95.5	125	4.35	34.140	7.00	27.088	98.4	0.139
194	4.02	34.160	7.03	1.68	10.	0.08	24.3	93.6	150	4.16	34.150	7.09	27.115	95.8	0.164
235	3.93	34.157	7.04	1.67	10.	0.03	24.3	92.9	200	4.01	34.161	7.03	27.141	93.4	0.212
286	3.82	34.158	7.01	1.67	11.	0.01	24.8	91.8	250	3.90	34.158	7.03	27.149	92.6	0.259
347	3.68	34.151	7.07	1.73	11.	0.01	25.1	91.0	300	3.79	34.157	7.03	27.160	91.6	0.307
418	3.61	34.156	6.79	1.78	14.	0.00	26.2	89.9	400	3.63	34.155	6.87	27.174	90.2	0.400
499	3.37	34.152	6.65	1.84	17.	0.00	27.2	88.0	500	3.37	34.153	6.65	27.198	88.0	0.493
591	3.20	34.172	6.29	1.95	22.	0.00	28.9	85.0	600	3.18	34.177	6.25	27.234	84.6	0.583
641	3.10	34.192	6.04	2.03	27.	0.00	30.0	82.6	700	2.98	34.224	5.77	27.290	79.3	0.669
692	2.99	34.220	5.80	2.12	32.	0.00	31.1	79.6							
743	2.94	34.232	5.64	2.14	34.	0.00	31.7	78.2							

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INDOMED LEG XIII CTU

11

LATITUDE 46 15.5S	LONGITUDE 52 43.0W	MO/DAY/YR 11/16/78	START TIME 1058 GMT	LATITUDE 49 33.9S	LONGITUDE 55 48.7W	MO/DAY/YR 11/17/78	START TIME 1633 GMT				
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	10.830	34.752	26.633	141.5	0.000	0	6.251	34.094	26.827	123.1	0.000
10	10.812	34.755	26.638	141.0	0.014	10	6.036	34.100	26.860	120.0	0.012
20	10.806	34.754	26.638	141.0	0.028	20	5.673	34.109	26.912	115.1	0.024
30	10.781	34.750	26.640	140.9	0.042	30	5.618	34.108	26.918	114.5	0.035
40	10.732	34.752	26.650	139.9	0.057	40	5.460	34.107	26.936	112.8	0.047
50	10.735	34.764	26.659	139.1	0.071	50	5.418	34.110	26.944	112.1	0.058
75	10.619	34.764	26.679	137.1	0.105	75	5.163	34.109	26.973	109.3	0.086
100	9.066	34.619	26.830	122.9	0.138	100	4.523	34.131	27.063	100.8	0.113
125	9.162	34.689	26.869	119.1	0.169	125	4.160	34.151	27.117	95.6	0.137
150	8.387	34.566	26.895	116.6	0.199	150	4.064	34.156	27.129	94.5	0.161
175	7.644	34.464	26.927	113.7	0.229	175	4.025	34.157	27.136	93.8	0.185
200	7.342	34.479	26.982	108.4	0.257	200	3.960	34.156	27.142	93.3	0.209
225	6.823	34.428	27.014	105.4	0.285	225	3.900	34.157	27.149	92.6	0.233
250	6.072	34.331	27.037	103.2	0.312	250	3.863	34.158	27.153	92.2	0.256
275	5.255	34.240	27.066	100.5	0.338	275	3.832	34.159	27.157	91.8	0.280
300	5.008	34.233	27.089	98.3	0.364	300	3.769	34.156	27.161	91.4	0.303
350	4.369	34.187	27.124	95.0	0.414	350	3.665	34.151	27.168	90.8	0.350
400	4.313	34.203	27.142	93.2	0.463	400	3.626	34.157	27.176	90.0	0.397
450	3.823	34.163	27.161	91.4	0.511	450	3.470	34.150	27.186	89.1	0.443
500	3.656	34.171	27.185	89.2	0.558	500	3.354	34.151	27.196	88.0	0.490
550	3.453	34.169	27.203	87.5	0.604	550	3.319	34.164	27.211	86.7	0.535
600	3.450	34.188	27.218	86.1	0.650	600	3.198	34.175	27.232	84.7	0.580
650	3.262	34.191	27.238	84.1	0.695	650	3.088	34.199	27.261	82.0	0.624
700	3.175	34.203	27.256	82.5	0.739	700	2.975	34.225	27.292	79.1	0.666
750	2.968	34.210	27.280	80.1	0.782	750	2.946	34.252	27.300	78.3	0.708
800	2.990	34.235	27.297	78.6	0.824	800	2.919	34.238	27.307	77.6	0.749
850	2.886	34.251	27.320	76.4	0.865						
900	2.893	34.279	27.342	74.3	0.905						
950	2.791	34.290	27.360	72.6	0.945						
1000	2.777	34.317	27.383	70.5	0.984						
1100	2.682	34.348	27.416	67.3	1.059						
1200	2.718	34.413	27.464	62.7	1.131						
1275	2.673	34.450	27.498	59.5	1.182						

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12 S						INDOOR LEG XIII CTU						12 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
49 25.9S	50 31.5W	11/19/78	2300 GMT			49 26.0S	50 32.3W	11/19/78	1855 GMT			49 26.0S	50 32.3W	11/19/78	1855 GMT		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	7.564	34.047	26.611	143.6	0.000	0	7.642	34.044	26.598	144.9	0.000	0	7.642	34.044	26.598	144.9	0.000
10	7.574	34.046	26.609	143.8	0.014	10	7.190	34.049	26.666	138.4	0.014	10	7.190	34.049	26.666	138.4	0.014
20	6.781	34.044	26.718	133.5	0.028	20	6.171	34.061	26.812	124.6	0.027	20	6.171	34.061	26.812	124.6	0.027
30	5.831	34.080	26.870	119.1	0.041	30	5.213	34.072	26.938	112.6	0.039	30	5.213	34.072	26.938	112.6	0.039
40	5.237	34.062	26.927	113.6	0.053	40	4.960	34.068	26.964	110.1	0.050	40	4.960	34.068	26.964	110.1	0.050
50	5.092	34.076	26.955	111.0	0.064	50	4.798	34.084	26.995	107.2	0.061	50	4.798	34.084	26.995	107.2	0.061
75	4.684	34.086	27.009	105.9	0.091	75	4.445	34.092	27.040	102.9	0.088	75	4.445	34.092	27.040	102.9	0.088
100	4.115	34.090	27.074	99.8	0.117	100	4.056	34.091	27.081	99.1	0.113	100	4.056	34.091	27.081	99.1	0.113
125	3.849	34.108	27.115	95.8	0.142	125	3.743	34.105	27.124	95.0	0.138	125	3.743	34.105	27.124	95.0	0.138
150	3.616	34.122	27.150	92.6	0.166	150	3.631	34.126	27.151	92.4	0.161	150	3.631	34.126	27.151	92.4	0.161
175	3.547	34.134	27.166	91.0	0.189	175	3.499	34.127	27.165	91.1	0.185	175	3.499	34.127	27.165	91.1	0.185
200	3.428	34.129	27.173	90.3	0.212	200	3.325	34.123	27.178	89.8	0.208	200	3.325	34.123	27.178	89.8	0.208
225	3.348	34.133	27.184	89.3	0.235	225	3.236	34.126	27.189	88.8	0.230	225	3.236	34.126	27.189	88.8	0.230
250	3.109	34.119	27.195	88.2	0.257	250	3.017	34.120	27.204	87.4	0.253	250	3.017	34.120	27.204	87.4	0.253
275	2.901	34.112	27.208	87.0	0.280	275	2.621	34.087	27.213	86.6	0.275	275	2.621	34.087	27.213	86.6	0.275
300	2.487	34.080	27.219	86.0	0.302	300	2.270	34.060	27.221	85.8	0.297	300	2.270	34.060	27.221	85.8	0.297
350	2.180	34.071	27.237	84.3	0.345	350	2.095	34.061	27.235	84.4	0.340	350	2.095	34.061	27.235	84.4	0.340
400	2.513	34.138	27.263	81.8	0.387	400	2.382	34.111	27.252	82.8	0.383	400	2.382	34.111	27.252	82.8	0.383
450	2.422	34.161	27.289	79.4	0.429	450	2.513	34.167	27.286	79.6	0.424	450	2.513	34.167	27.286	79.6	0.424
500	2.343	34.177	27.308	77.5	0.469	500	2.362	34.183	27.311	77.2	0.465	500	2.362	34.183	27.311	77.2	0.465
550	2.245	34.206	27.339	74.6	0.509	550	2.253	34.217	27.347	75.8	0.504	550	2.253	34.217	27.347	75.8	0.504
600	2.301	34.258	27.376	71.1	0.546	600	2.331	34.254	27.370	71.6	0.542	600	2.331	34.254	27.370	71.6	0.542
650	2.406	34.301	27.402	68.7	0.583	650	2.444	34.299	27.397	69.1	0.578	650	2.444	34.299	27.397	69.1	0.578
700	2.486	34.329	27.417	67.2	0.619	700	2.446	34.337	27.427	66.2	0.614	700	2.446	34.337	27.427	66.2	0.614
750	2.533	34.378	27.452	63.8	0.653	750	2.468	34.382	27.461	63.0	0.648	750	2.468	34.382	27.461	63.0	0.648
800	2.538	34.413	27.480	61.2	0.687	800	2.488	34.416	27.487	60.6	0.681	800	2.488	34.416	27.487	60.6	0.681
850	2.499	34.441	27.506	58.8	0.719	850	2.516	34.443	27.506	58.8	0.713	850	2.516	34.443	27.506	58.8	0.713
900	2.449	34.469	27.532	56.3	0.750	900	2.428	34.464	27.530	56.5	0.745	900	2.428	34.464	27.530	56.5	0.745
950	2.404	34.490	27.553	54.3	0.780	950	2.385	34.494	27.557	53.9	0.775	950	2.385	34.494	27.557	53.9	0.775
1000	2.380	34.510	27.571	52.6	0.810	1000	2.376	34.515	27.575	52.2	0.804	1000	2.376	34.515	27.575	52.2	0.804
1100	2.342	34.563	27.616	48.3	0.866	1100	2.341	34.552	27.607	49.1	0.860	1100	2.341	34.552	27.607	49.1	0.860
1200	2.276	34.590	27.643	45.8	0.919	1200	2.275	34.594	27.646	45.5	0.913	1200	2.275	34.594	27.646	45.5	0.913
1300	2.233	34.614	27.666	43.6	0.970	1300	2.223	34.619	27.671	43.2	0.964	1300	2.223	34.619	27.671	43.2	0.964
1400	2.180	34.640	27.691	41.2	1.019	1400	2.160	34.643	27.695	40.9	1.013	1400	2.160	34.643	27.695	40.9	1.013
1500	2.134	34.659	27.710	39.4	1.067	1500	2.116	34.668	27.718	38.6	1.060	1500	2.116	34.668	27.718	38.6	1.060
1600	2.073	34.682	27.733	37.2	1.112	1600	2.088	34.677	27.728	37.7	1.105	1600	2.088	34.677	27.728	37.7	1.105
1684	2.013	34.695	27.748	35.8	1.149	1700	2.025	34.691	27.744	36.2	1.150	1700	2.025	34.691	27.744	36.2	1.150
						1800	1.958	34.699	27.756	35.1	1.193	1800	1.958	34.699	27.756	35.1	1.193
						1900	1.899	34.706	27.766	34.1	1.286	1900	1.899	34.706	27.766	34.1	1.286
						2000	1.783	34.713	27.781	32.7	1.278	2000	1.783	34.713	27.781	32.7	1.278
						2100	1.755	34.716	27.785	32.3	1.318	2100	1.755	34.716	27.785	32.3	1.318
						2200	1.691	34.717	27.791	31.8	1.359	2200	1.691	34.717	27.791	31.8	1.359
						2300	1.499	34.720	27.807	30.2	1.398	2300	1.499	34.720	27.807	30.2	1.398
						2400	1.389	34.720	27.815	29.5	1.435	2400	1.389	34.720	27.815	29.5	1.435
						2500	1.347	34.718	27.817	29.3	1.472	2500	1.347	34.718	27.817	29.3	1.472
						2600	1.292	34.717	27.820	29.1	1.508	2600	1.292	34.717	27.820	29.1	1.508
						2700	1.268	34.717	27.821	28.9	1.544	2700	1.268	34.717	27.821	28.9	1.544
						2800	1.214	34.717	27.825	28.5	1.580	2800	1.214	34.717	27.825	28.5	1.580
						2900	1.001	34.710	27.834	27.7	1.615	2900	1.001	34.710	27.834	27.7	1.615
						3000	1.002	34.710	27.834	27.7	1.649	3000	1.002	34.710	27.834	27.7	1.649
						3100	0.994	34.708	27.833	27.8	1.683	3100	0.994	34.708	27.833	27.8	1.683
						3200	0.958	34.706	27.833	27.8	1.717	3200	0.958	34.706	27.833	27.8	1.717
						3300	0.966	34.707	27.834	27.7	1.751	3300	0.966	34.707	27.834	27.7	1.751
						3400	0.913	34.703	27.834	27.7	1.785	3400	0.913	34.703	27.834	27.7	1.785
						3500	0.897	34.702	27.834	27.7	1.818	3500	0.897	34.702	27.834	27.7	1.818
						3600	0.851	34.701	27.836	27.5	1.852	3600	0.851	34.701	27.836	27.5	1.852
						3700	0.689	34.692	27.839	27.2	1.885	3700	0.689	34.692	27.839	27.2	1.885
						3800	0.593	34.689	27.843	26.9	1.916	3800	0.593	34.689	27.843	26.9	1.916
						3900	0.533	34.686	27.844	26.8	1.946	3900	0.533	34.686	27.844	26.8	1.946
						4000	0.480	34.683	27.845	26.7	1.976	4000	0.480	34.683	27.845	26.7	1.976
						4021	0.480	34.684	27.845	26.6	1.982	4021	0.480	34.684	27.845	26.6	1.982

RV MELVILLE

INNOVED L6 XIII

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LATITUDE 46 28.0S		LONGITUDE 41 08.6W		MO/DAY/YR 11/21/78		MESSENGER 1429 1840		TIME GMT		BOTTOM 5673M		WIND 10U		SPEED 25KT		WEATHER 6		DOMINANT WAVES 49	
Z	T	S	U2	PO4	SI03	NO2	NO3	DT	Z	I	S	O2	SI6T	DT	DD				
1	9.77	34.536	6.71	0.80	4.	0.11	9.2	140.0	0	9.77	34.536	6.71	26.649	140.0	0.000				
42	9.10	34.575	6.68	0.85	4.	0.12	9.6	126.6	10	9.63	34.549	6.70	26.682	136.9	0.014				
67	8.65	34.577	6.48	0.91	4.	0.17	11.4	119.7	20	9.47	34.560	6.70	26.717	133.5	0.027				
93	8.03	34.488	6.45	1.10	5.	0.15	13.8	117.3	30	9.30	34.570	6.69	26.751	130.3	0.041				
123	7.39	34.418	6.35	1.15	6.	0.04	16.3	113.6	50	8.97	34.583	6.61	26.816	124.1	0.066				
154	7.21	34.441	6.00	1.40	8.	0.07	18.6	109.5	75	8.46	34.553	6.47	26.873	118.7	0.097				
184	6.48	34.360	5.94	1.52	9.	0.05	21.6	106.1	100	7.86	34.467	6.44	26.897	116.5	0.127				
215	5.81	34.302	5.91	1.63	11.	0.21	22.7	102.2	125	7.88	34.421	6.33	26.930	113.4	0.156				
245	5.25	34.263	5.94	1.63	12.	0.02	24.8	98.7	150	7.24	34.439	6.04	26.965	110.0	0.184				
276	4.88	34.235	6.02	1.58	12.	0.04	25.4	96.8	200	6.12	34.328	5.92	27.028	104.1	0.239				
316	4.57	34.210	6.27					93.3	250	5.18	34.259	5.95	27.089	98.3	0.291				
355	4.12	34.183	6.36	1.65	15.	0.04	26.4	92.8	300	4.69	34.221	6.17	27.114	95.9	0.341				
406	3.86	34.175	6.40					90.9	400	3.88	34.176	6.40	27.165	91.0	0.438				
457	3.66	34.168	6.44					89.5	500	3.50	34.166	6.38	27.196	88.2	0.531				
533	3.38	34.166	6.30	1.93	19.	0.07	27.7	87.1	600	3.20	34.176	6.16	27.232	84.8	0.622				
608	3.18	34.177	6.14	2.03	23.	0.01	29.0	84.5	700	2.92	34.199	5.87	27.275	80.7	0.709				
709	2.90	34.200	5.84	2.08	28.	0.01	30.2	80.3	800	2.76	34.232	5.57	27.316	76.8	0.792				
809	2.75	34.235	5.54	1.98	35.	0.02	31.4	76.4	1000	2.72	34.358	4.72	27.419	67.0	0.946				
910	2.76	34.295	5.12	2.25	42.	0.00	32.1	72.0	1200	2.71	34.484	4.26	27.521	57.4	1.084				
1011	2.72	34.365	4.68	2.37	51.	0.01	33.4	66.4	1500	2.61	34.602	4.11	27.624	47.6	1.266				
1113	2.73	34.424	4.44	2.38	56.	0.01	33.6	62.0	1750	2.64	34.693	4.24	27.694	40.9	1.400				
1211A	2.71	34.490	4.24	2.31	65.	0.01	33.8	56.8	2000	2.65	34.757	4.57	27.745	36.1	1.525				
1316	2.66	34.531	4.18	2.36	69.	0.01	34.0	53.3	2250	2.57	34.787	4.72	27.775	33.2	1.644				
1414A	2.61	34.569	4.09	2.35	71.	0.00	33.4	50.0	2500	2.44	34.810	4.88	27.805	30.4	1.758				
1516A	2.61	34.607	4.11	2.05	74.	0.01	33.0	47.2	2750	2.22	34.805	4.94	27.819	29.1	1.867				
1619A	2.63	34.643	4.11	2.23	75.	0.01	32.4	44.6	3000	1.91	34.787	4.89	27.830	28.1	1.972				
1746A	2.64	34.692	4.24	2.18	75.	0.01	30.6	41.0	3250	1.54	34.747	4.73	27.826	28.5	2.072				
1873A	2.62	34.722	4.36	2.10	72.	0.00	30.6	38.6	3500	1.26	34.730	4.79	27.832	27.9	2.168				
2001A	2.65	34.758	4.57	1.78	69.	0.00	29.3	36.1	3750	1.01	34.715	4.81	27.837	27.4	2.258				
2129A	2.612	34.775	4.65	1.89	69.	0.00	28.8	34.5	4000	0.73	34.700	4.95	27.842	26.9	2.342				
2282A	2.560	34.790	4.74	1.95	69.	0.01	28.1	32.9	4250	0.49	34.688	5.13	27.848	26.4	2.419				
2435A	2.495	34.809	4.89	1.88	68.	0.00	27.5	30.9	4500	0.34	34.680	5.10	27.850	26.2	2.491				
2614A	2.334	34.808	4.87	1.85	73.	0.00	27.5	29.7	4750	0.28	34.675	5.14	27.849	26.2	2.559				
2793A	2.186	34.804	4.96	1.83	76.	0.00	27.4	28.9	5000	0.25	34.673	5.18	27.849	26.3	2.627				
2998A	1.909	34.787	4.89	1.96	86.	0.00	28.8	28.1	5250	0.25	34.671	5.21	27.848	26.4	2.694				
3203A	1.598	34.751	4.73	2.13	101.	0.03	29.9	28.6	5500	0.25	34.669	5.16	27.846	26.5	2.762				
3406A	1.349	34.734	4.78	2.18	110.	0.12	30.8	28.1											
3611A	1.157	34.724	4.80	2.29	116.	0.02	31.4	27.6											
3814A	0.933	34.710	4.82	2.25	121.	0.04	30.9	27.3											
4018A	0.716	34.698	4.94	2.31	126.	0.02	32.1	26.9											
4273A	0.471	34.687	5.14	2.33	131.	0.03	32.3	26.3											
4526A	0.329	34.679	5.09	2.37	133.	0.05	31.8	26.2											
4779A	0.275	34.674	5.15	2.35	133.	0.01	32.3	26.3											
5031A	0.247	34.672	5.18	2.31	133.	0.00	32.1	26.3											
5283A	0.245	34.670	5.21	2.37	133.	0.05	32.3	26.4											
5485A	0.234	34.669	5.16	2.35	133.	0.01	32.9	26.3											

13 S						INDOMED LEG XIII CTD						13 D					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			
46 28.0S		41 57.6W		11/21/78		1752 GMT		46 28.8S		41 59.3W		11/21/78		1253 GMT			
Z	T	S	SIGMA T	DT	DD			Z	T	S	SIGMA T	DT	DD				
0	9.632	34.548	26.681	136.9	0.000			0	9.573	34.547	26.690	136.1	0.000				
10	9.421	34.565	26.730	132.4	0.013			10	9.269	34.550	26.743	131.1	0.013				
20	9.245	34.561	26.755	129.9	0.027			20	9.236	34.567	26.761	129.3	0.026				
30	9.055	34.553	26.780	127.6	0.040			30	9.167	34.572	26.777	127.9	0.049				
40	9.040	34.572	26.797	125.9	0.052			40	8.939	34.565	26.808	124.9	0.052				
50	8.876	34.578	26.828	123.0	0.065			50	8.739	34.568	26.842	121.7	0.064				
75	8.475	34.562	26.878	118.2	0.095			75	8.582	34.565	26.864	119.6	0.095				
100	8.170	34.537	26.906	115.7	0.125			100	8.219	34.533	26.895	116.7	0.125				
125	7.488	34.455	26.942	112.2	0.154			125	7.577	34.487	26.915	114.8	0.154				
150	7.184	34.427	26.963	110.2	0.182			150	7.373	34.447	26.952	111.2	0.183				
175	6.643	34.374	26.996	107.1	0.210			175	6.570	34.360	26.995	107.2	0.211				
200	6.166	34.342	27.034	103.5	0.237			200	6.089	34.326	27.031	103.8	0.238				
225	5.569	34.291	27.068	100.2	0.263			225	5.551	34.280	27.062	100.9	0.264				
250	5.253	34.272	27.091	98.1	0.289			250	5.325	34.267	27.079	99.3	0.290				
275	4.971	34.251	27.108	96.5	0.314			275	5.042	34.249	27.098	97.5	0.315				
300	4.699	34.231	27.122	95.1	0.339			300	4.666	34.221	27.118	95.5	0.340				
350	4.183	34.194	27.149	92.6	0.387			350	4.197	34.190	27.144	93.0	0.389				
400	3.891	34.183	27.171	90.6	0.435			400	3.940	34.179	27.162	91.4	0.437				
450	3.671	34.176	27.187	89.0	0.481			450	3.705	34.171	27.180	89.7	0.484				
500	3.515	34.175	27.201	87.6	0.527			500	3.459	34.169	27.202	87.6	0.530				
550	3.301	34.173	27.220	85.9	0.573			550	3.248	34.171	27.224	85.5	0.575				
600	3.161	34.181	27.240	84.0	0.617			600	3.137	34.184	27.244	83.6	0.620				
650	3.059	34.199	27.263	81.8	0.661			650	2.985	34.194	27.266	81.5	0.663				
700	2.928	34.200	27.276	80.6	0.703			700	2.896	34.208	27.285	79.7	0.705				
750	2.887	34.215	27.292	79.1	0.745			750	2.837	34.229	27.307	77.6	0.747				
800	2.861	34.244	27.317	76.7	0.787			800	2.806	34.255	27.331	75.4	0.787				
850	2.793	34.268	27.342	74.3	0.827			850	2.789	34.279	27.351	73.4	0.827				
900	2.775	34.294	27.365	72.2	0.866			900	2.776	34.308	27.376	71.1	0.866				
950	2.764	34.321	27.387	70.0	0.905			950	2.752	34.341	27.404	68.4	0.903				
1000	2.731	34.350	27.413	67.6	0.942			1000	2.737	34.370	27.428	66.1	0.940				
1100	2.733	34.410	27.461	63.1	1.013			1100	2.734	34.429	27.476	61.6	1.010				
1200	2.683	34.469	27.512	58.2	1.081			1200	2.698	34.480	27.520	57.5	1.077				
1300	2.678	34.524	27.556	54.0	1.145			1300	2.672	34.525	27.558	53.9	1.140				
1325	2.682	34.540	27.569	52.8	1.160			1400	2.632	34.570	27.597	50.1	1.200				
								1500	2.621	34.608	27.628	47.2	1.257				
								1600	2.631	34.642	27.655	44.7	1.312				
								1700	2.655	34.683	27.685	41.8	1.366				
								1800	2.638	34.705	27.704	40.0	1.417				
								1900	2.658	34.734	27.726	38.0	1.467				
								2000	2.664	34.758	27.744	36.2	1.516				
								2100	2.654	34.772	27.756	35.0	1.565				
								2200	2.612	34.780	27.766	34.1	1.612				
								2300	2.564	34.790	27.778	32.9	1.659				
								2400	2.538	34.803	27.791	31.8	1.705				
								2500	2.467	34.810	27.803	30.6	1.751				
								2600	2.352	34.802	27.806	30.3	1.795				
								2700	2.286	34.807	27.816	29.4	1.839				
								2800	2.192	34.801	27.819	29.1	1.883				
								2900	2.061	34.793	27.823	28.7	1.925				
								3000	1.901	34.780	27.825	28.5	1.967				
								3100	1.739	34.764	27.825	28.6	2.008				
								3200	1.605	34.751	27.824	28.6	2.048				
								3300	1.468	34.741	27.826	28.4	2.087				
								3400	1.377	34.735	27.828	28.3	2.126				
								3500	1.274	34.729	27.831	28.0	2.164				
								3600	1.170	34.723	27.833	27.8	2.201				
								3700	1.075	34.718	27.835	27.6	2.237				
								3800	0.956	34.710	27.837	27.4	2.272				
								3900	0.862	34.704	27.838	27.3	2.306				
								4000	0.755	34.698	27.840	27.1	2.339				
								4100	0.635	34.692	27.842	26.9	2.371				
								4200	0.536	34.687	27.845	26.7	2.402				
								4300	0.465	34.683	27.846	26.6	2.432				
								4400	0.387	34.679	27.847	26.5	2.461				
								4500	0.346	34.676	27.847	26.5	2.489				
								4600	0.317	34.675	27.848	26.4	2.517				
								4700	0.293	34.672	27.847	26.5	2.545				
								4800	0.275	34.670	27.846	26.6	2.572				
								4900	0.259	34.669	27.846	26.6	2.600				
								5000	0.250	34.667	27.845	26.7	2.627				
								5100	0.248	34.666	27.844	26.7	2.654				
								5200	0.245	34.666	27.844	26.7	2.682				
								5300	0.247	34.664	27.843	26.9	2.709				
								5400	0.249	34.663	27.842	27.0	2.736				
								5500	0.250	34.662	27.841	27.0	2.764				

RV MELVILLE						INNOUED L& XIII										
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
47 14.7S		41 00.4W		11/22/78		0300 0707		GMT	5964M	19U	18KT	1				
Z	T	S	O2	P04	SIO3	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD	
1	9.38	34.530	6.72	0.73	3.	0.16	8.4	134.3	0	9.38	34.530	6.72	26.709	134.3	0.000	
42	9.31	34.568	6.55	0.84	3.	0.19	9.5	130.4	10	9.37	34.531	6.68	26.712	134.0	0.013	
72	9.25	34.654	6.45	0.87	4.	0.28	10.2	123.1	20	9.33	34.537	6.64	26.719	133.4	0.027	
103	9.13	34.637	6.36	0.88	5.	0.29	10.7	122.5	30	9.35	34.548	6.60	26.730	132.3	0.040	
133	9.05	34.633	6.49	0.89	4.	0.21	10.4	121.6	50	9.30	34.595	6.52	26.772	128.3	0.066	
174	8.91	34.638	6.25	0.96	5.	0.24	13.0	119.1	75	9.24	34.633	6.44	26.828	123.0	0.098	
215	7.62	34.492	5.99	1.33	7.	0.03	19.1	111.3	100	9.14	34.640	6.36	26.833	122.6	0.129	
256	6.34	34.353	5.89	1.56	10.	0.02	22.9	104.9	125	9.07	34.634	6.46	26.840	121.9	0.160	
306	5.37	34.269	5.95	1.70	12.	0.01	25.3	99.6	150	8.99	34.631	6.42	26.850	121.0	0.191	
357	4.62	34.212	6.22	1.78	14.	0.01	26.1	95.7	200	8.16	34.553	6.08	26.919	114.3	0.251	
408	4.29	34.196	6.37	1.78	15.	0.01	26.4	93.5	250	6.51	34.372	5.90	27.011	105.7	0.308	
459	4.06	34.186	6.41	1.84	15.	0.00	26.6	92.0	300	5.46	34.277	5.94	27.070	100.1	0.362	
510	3.862	34.184	6.31	1.87	18.	0.00	27.3	90.2	400	4.32	34.198	6.35	27.136	93.8	0.462	
562	3.676	34.183	6.29	1.90	19.	0.00	28.1	88.5	500	3.90	34.185	6.33	27.170	90.6	0.559	
637	3.305	34.170	6.28	1.94	22.	0.01	28.7	86.1	600	3.49	34.177	6.28	27.205	87.3	0.652	
714	3.066	34.181	6.10	2.01	26.	0.00	29.3	83.2	700	3.10	34.178	6.14	27.242	83.8	0.742	
815	2.825	34.225	5.81	2.05	31.	0.02	30.3	77.8	800	2.85	34.218	5.86	27.297	78.6	0.828	
943	2.753	34.279	5.21	2.24	43.	0.00	32.9	73.1	1000	2.73	34.312	4.98	27.382	70.5	0.968	
1069	2.721	34.354	4.74	2.35	52.	0.00	34.1	67.2	1200	2.72	34.438	4.42	27.484	60.8	1.132	
1176A	2.72	34.424	4.46	2.43	59.	0.00	34.1	61.9	1500	2.69	34.582	4.19	27.600	49.8	1.323	
1373	2.690	34.324	4.23	2.38	66.	0.00	34.4	54.1	1750	2.63	34.664	4.19	27.672	43.0	1.463	
1476A	2.69	34.370	4.20	2.35	68.	0.00	33.5	50.6	2000	2.61	34.724	4.44	27.721	38.4	1.593	
1625A	2.71	34.633	4.18	2.29	69.	0.00	32.8	46.0	2250	2.59	34.782	4.74	27.770	33.7	1.715	
1774A	2.61	34.669	4.19	2.20	72.	0.00	32.4	42.5	2500	2.57	34.816	5.01	27.800	30.9	1.831	
1923A	2.66	34.711	4.41	2.14	70.	0.00	31.1	39.7	2750	2.53	34.810	5.00	27.814	29.5	1.944	
2074A	2.56	34.735	4.46	2.13	72.	0.00	30.8	37.1	3000	2.05	34.788	4.88	27.819	29.1	2.053	
2223A	2.56	34.772	4.67	2.16	69.	0.00	29.2	34.3	3250	1.68	34.753	4.76	27.820	29.0	2.157	
2397A	2.69	34.825	5.05	1.87	58.	0.00	26.6	31.4	3500	1.44	34.741	4.82	27.827	28.3	2.258	
2575A	2.46	34.807	4.95	1.92	67.	0.00	27.6	30.8	3750	1.19	34.724	4.86	27.831	27.9	2.353	
2771A	2.32	34.811	5.01	1.87	69.	0.00	27.5	29.4	4000	0.96	34.710	4.88	27.836	27.5	2.443	
2971A	2.10	34.793	4.89	1.91	77.	0.01	28.4	29.0	4250	0.71	34.695	4.96	27.839	27.2	2.527	
3169A	1.788	34.760	4.80	2.11	92.	0.01	30.1	29.2	4500	0.52	34.684	5.06	27.842	26.9	2.606	
3368A	1.554	34.745	4.74	2.14	101.	0.01	31.0	28.7	4750	0.39	34.680	5.12	27.847	26.5	2.680	
3567A	1.388	34.737	4.86	2.16	105.	0.00	31.0	28.2	5000	0.32	34.674	5.18	27.846	26.6	2.751	
3766A	1.177	34.722	4.86	2.19	111.	0.01	31.6	27.9	5250	0.28	34.670	5.21	27.845	26.7	2.821	
3965A	0.992	34.712	4.87	2.23	116.	0.01	32.0	27.5	5500	0.28	34.671	5.22	27.846	26.5	2.890	
4214A	0.744	34.696	4.94	2.26	121.	0.01	32.4	27.2	5750	0.28	34.667	5.24	27.842	26.9	2.959	
4463A	0.544	34.684	5.05	2.30	124.	0.01	32.9	27.0								
4710A	0.409	34.681	5.11	2.32	127.	0.00	32.9	26.5								
4959A	0.329	34.674	5.26U	2.32	128.	0.00	32.8	26.5								
5206A	0.288	34.669	5.21	2.32	129.	0.00	32.9	26.7								
5453A	0.274	34.671	5.21	2.33	130.	0.00	32.8	26.5								
5700A	0.282	34.667	5.26	2.35	130.	0.00	33.0	26.8								
5946A	0.291	34.663	5.15	2.34	130.	0.02	33.0	27.2								

RV MELVILLE										INNOUED L& XIII									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
47 57.4S		41 06.3W		11/22/78		1415 1741		GMT	5993M	220	16KT	1	220 3 4						
Z	T	S	O2	P04	SIO3	N02	N03	DT	Z	T	S	O2	SIGT	DT	DD				
1	7.96	34.218	7.01	1.02	1.	0.17	12.1	136.4	0	7.96	34.22	7.01	26.687	136.4	0.000				
42	9.12	34.551	6.65	0.82	2.	0.17	9.1	128.7	10	8.36	34.32	6.92	26.709	134.3	0.014				
72	8.92	34.547	6.49	0.91	2.	0.21	10.3	126.0	20	8.70	34.42	6.82	26.731	132.3	0.027				
103	7.30	34.309	6.69	1.17	3.	0.17	14.3	120.5	30	8.95	34.49	6.74	26.749	130.5	0.040				
133	7.28	34.398	6.21	1.33	6.	0.11	17.6	113.6	50	9.07	34.55	6.59	26.775	128.0	0.066				
174	5.40	34.202	6.36	1.62	8.	0.10	22.2	105.0	75	8.76	34.52	6.52	26.801	125.5	0.098				
215	4.87	34.184	6.48	1.74	10.	0.20	23.1	100.5	100	7.45	34.33	6.68	26.848	121.2	0.129				
256	4.78	34.224	6.17	1.78	10.	0.01	24.9	96.5	125	7.29	34.37	6.35	26.907	115.5	0.159				
306	4.34	34.195	6.30	1.82	12.	0.01	25.4	94.1	150	6.55	34.32	6.27	26.968	109.7	0.188				
357	3.92	34.172	6.41	1.88	13.	0.01	26.3	91.7	200	4.96	34.18	6.46	27.052	101.8	0.242				
408	3.68	34.165	6.40	1.89	15.	0.01	26.5	89.9	250	4.79	34.22	6.22	27.102	97.0	0.293				
459	3.50	34.169	6.31	1.94	17.	0.01	27.3	88.0	300	4.40	34.20	6.28	27.131	94.3	0.342				
510	3.33	34.170	6.23	1.98	20.	0.01	27.7	86.3	400	3.71	34.17	6.40	27.175	90.2	0.438				
561	3.19	34.172	6.12	2.02	22.	0.00	28.2	84.9	500	3.36	34.17	6.25	27.212	86.6	0.529				
637	2.91	34.191	5.90	2.10	28.	0.00	29.5	81.1	600	3.04	34.18	6.02	27.250	83.1	0.618				
714	2.80	34.224	5.60	2.17	33.	0.00	30.9	77.7	700	2.81	34.22	5.66	27.300	78.3	0.783				
815	2.74	34.279	5.20	2.28	41.	0.00	32.2	73.0	800	2.74	34.27	5.26	27.348	73.7	0.783				
943	2.80	34.364	4.75	2.35	50.	0.00	33.0	67.1	1000	2.74	34.40	4.59	27.448	64.2	0.932				
1069	2.64	34.429	4.42	2.38	60.	0.00	33.8	60.9	1200	2.33	34.49	4.22	27.541	55.3	1.064				
1227A	2.51	34.50	4.19	2.43	69.	0.00	34.0	54.4	1500	2.43	34.63	4.11	27.662	44.0	1.237				
1374	2.44	34.575	4.05	2.42	76.	0.00	34.2	48.2	1750	2.55	34.72	4.31	27.725	38.0	1.363				
1527A	2.43	34.53	4.13	2.40	71.	0.00	33.6		2000	2.52	34.77	4.61	27.763	34.4	1.482				
1675A	2.42	34.61	4.13	2.35	72.	0.00	32.5		2250	2.27	34.76	4.62	27.763	32.6	1.595				
1823A	2.66	34.75	4.50	2.02	67.	0.00	29.1	36.8	2500	2.30	34.61	4.93	27.818	29.3	1.703				
1973A	2.51	34.76	4.56	2.06	72.	0.00	29.2	34.8	2750	1.97	34.79	4.86	27.825	28.5	1.807				
2122A	2.55	34.79	4.78	1.97	67.	0.00	27.7	32.8	3000	1.66	34.76	4.78	27.829	28.2	1.907				
2271A	2.226	34.76	4.59	2.08	81.	0.00	29.3	32.5	3250	1.34	34.74	4.73	27.831	27.9	2.003				
2443A	2.347	34.81	4.94	1.92	69.	0.00	26.8	29.7	3500	1.10	34.72	4.78	27.832	28.0	2.094				
2617A	2.150	34.80	4.90	1.95	76.	0.00	27.3	28.9	3750	0.87	34.70	4.86	27.836	27.5	2.181				
2815A	1.877	34.78	4.84	2.02	86.	0.00	29.2	28.4	4000	0.67	34.70	4.91	27.847	26.5	2.262				
3012A	1.644	34.76	4.78	2.06	88.	0.00	30.0	28.2	4250	0.49	34.69	5.11	27.849	26.3	2.358				
3210A	1.379	34.74	4.72	2.18	107.	0.00	31.5	27.9	4500	0.35	34.68	5.12	27.849	26.3	2.410				
3407A	1.191	34.72	4.75	2.20	112.	0.00	31.6	28.2	4750	0.28	34.67	5.17	27.846	26.6	2.479				
3605A	0.992	34.71	4.82	2.28	119.	0.00	32.1	27.7	5000	0.25	34.67	5.19	27.847	26.4	2.547				
3800A	0.830	34.70	4.87	2.27	121.	0.00	32.3	27.4	5250	0.25	34.67	5.21	27.847	26.4	2.615				
3997A	0.674	34.70	4.91	2.29	122.	0.00	32.4	26.5	5500	0.23	34.67	5.23	27.847	26.4	2.683				
4241A	0.500	34.69	5.11	2.30	126.	0.00	32.7	26.3	5750	0.26	34.67	5.25	27.845	26.7	2.751				
4486A	0.355	34.68	5.12	2.32	128.	0.00	32.7	26.2	6000	0.27	34.66	5.21	27.838	27.3	2.821				
4729A	0.279	34.67	5.17	2.34	130.	0.00	32.8	26.6											
4972A	0.252	34.67	5.19	2.34	130.	0.02	33.0	26.5											
5214A	0.247	34.67	5.21	2.34	131.	0.00	32.9	26.4											
5455A	0.248	34.67	5.22	2.33	130.	0.02	32.9	26.4											
5693A	0.262	34.67	5.26	2.34	130.	0.02	33.0	26.5											
5933A	0.270	34.66	5.22	2.29	130.	0.03	32.9	27.3											

14						INDOMED LEG XIII CTD						16					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
47 15.1S	41 49.5W	11/22/78	0622 GMT			47 57.7S	41 53.7W	11/22/78	1651 GMT								
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	9.370	34.541	26.719	133.3	0.000	0	8.153	34.263	26.694	135.8	0.000	0	8.153	34.263	26.694	135.8	0.000
10	9.379	34.538	26.715	133.7	0.013	10	8.121	34.264	26.699	135.2	0.014	10	8.121	34.264	26.699	135.2	0.014
20	9.383	34.538	26.715	133.8	0.027	20	8.278	34.309	26.711	134.2	0.027	20	8.278	34.309	26.711	134.2	0.027
30	9.320	34.563	26.745	130.9	0.040	30	8.658	34.403	26.726	132.7	0.040	30	8.658	34.403	26.726	132.7	0.040
40	9.499	34.646	26.780	127.6	0.053	40	9.180	34.565	26.769	128.6	0.054	40	9.180	34.565	26.769	128.6	0.054
50	9.459	34.646	26.786	126.9	0.066	50	9.153	34.572	26.779	127.7	0.066	50	9.153	34.572	26.779	127.7	0.066
75	9.167	34.646	26.834	122.4	0.097	75	8.064	34.381	26.799	125.7	0.098	75	8.064	34.381	26.799	125.7	0.098
100	9.106	34.638	26.838	122.1	0.128	100	7.492	34.361	26.868	119.3	0.129	100	7.492	34.361	26.868	119.3	0.129
125	9.034	34.631	26.844	121.5	0.159	125	7.525	34.424	26.913	115.0	0.159	125	7.525	34.424	26.913	115.0	0.159
150	9.070	34.644	26.849	121.1	0.190	150	6.293	34.287	26.974	109.2	0.188	150	6.293	34.287	26.974	109.2	0.188
175	8.892	34.632	26.868	119.3	0.221	175	5.446	34.209	27.019	105.0	0.215	175	5.446	34.209	27.019	105.0	0.215
200	8.272	34.575	26.920	114.3	0.251	200	4.951	34.186	27.058	101.2	0.241	200	4.951	34.186	27.058	101.2	0.241
225	7.476	34.475	26.960	110.6	0.280	225	4.876	34.201	27.079	99.3	0.267	225	4.876	34.201	27.079	99.3	0.267
250	6.707	34.388	26.999	106.9	0.308	250	4.852	34.228	27.103	97.0	0.292	250	4.852	34.228	27.103	97.0	0.292
275	6.051	34.324	27.034	103.5	0.336	275	4.668	34.222	27.119	95.5	0.317	275	4.668	34.222	27.119	95.5	0.317
300	5.567	34.287	27.065	100.5	0.362	300	4.498	34.208	27.126	94.7	0.341	300	4.498	34.208	27.126	94.7	0.341
350	4.784	34.227	27.110	96.3	0.413	350	4.048	34.180	27.152	92.3	0.390	350	4.048	34.180	27.152	92.3	0.390
400	4.353	34.200	27.136	93.9	0.463	400	3.747	34.174	27.178	89.9	0.437	400	3.747	34.174	27.178	89.9	0.437
450	4.087	34.190	27.156	92.0	0.511	450	3.556	34.171	27.194	88.3	0.483	450	3.556	34.171	27.194	88.3	0.483
500	3.902	34.188	27.173	90.3	0.559	500	3.358	34.174	27.216	86.3	0.529	500	3.358	34.174	27.216	86.3	0.529
550	3.702	34.188	27.193	88.4	0.606	550	3.201	34.178	27.234	84.6	0.573	550	3.201	34.178	27.234	84.6	0.573
600	3.529	34.186	27.209	86.9	0.652	600	3.050	34.184	27.252	82.8	0.617	600	3.050	34.184	27.252	82.8	0.617
650	3.311	34.182	27.227	85.3	0.697	650	2.879	34.202	27.282	80.0	0.660	650	2.879	34.202	27.282	80.0	0.660
700	3.105	34.182	27.246	83.4	0.742	700	2.802	34.224	27.306	77.7	0.701	700	2.802	34.224	27.306	77.7	0.701
750	2.962	34.196	27.270	81.2	0.785	750	2.768	34.246	27.327	75.7	0.742	750	2.768	34.246	27.327	75.7	0.742
800	2.844	34.210	27.292	79.1	0.828	800	2.754	34.278	27.354	73.2	0.781	800	2.754	34.278	27.354	73.2	0.781
850	2.750	34.228	27.314	76.9	0.869	850	2.771	34.318	27.384	70.3	0.820	850	2.771	34.318	27.384	70.3	0.820
900	2.786	34.263	27.339	74.6	0.909	900	2.805	34.349	27.406	68.3	0.857	900	2.805	34.349	27.406	68.3	0.857
950	2.765	34.294	27.365	72.1	0.949	950	2.809	34.379	27.429	66.0	0.893	950	2.809	34.379	27.429	66.0	0.893
1000	2.736	34.320	27.389	69.9	0.987	1000	2.676	34.394	27.453	63.8	0.929	1000	2.676	34.394	27.453	63.8	0.929
1100	2.728	34.383	27.440	65.1	1.061	1100	2.620	34.445	27.498	59.5	0.996	1100	2.620	34.445	27.498	59.5	0.996
1200	2.744	34.445	27.488	60.5	1.131	1200	2.483	34.484	27.541	55.4	1.060	1200	2.483	34.484	27.541	55.4	1.060
1300	2.705	34.498	27.533	56.2	1.197	1300	2.501	34.531	27.577	52.0	1.121	1300	2.501	34.531	27.577	52.0	1.121
1376	2.694	34.532	27.561	53.5	1.244	1379	2.429	34.562	27.608	49.1	1.167	1379	2.429	34.562	27.608	49.1	1.167

RV MELVILLE

INNOUED L&L XIII

17

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
48 38.9S		41 02.3W		11/23/78		0009 0419		GNT		5634M		290		16KT		1			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI03	DT	DO				
1	5.15	33.889	7.74	1.32	6.	0.22	19.3	125.7	0	5.15	33.889	7.74	26.801	125.7	0.000				
42	4.00	33.939	7.63	1.52	9.	0.21	21.5	110.0	10	4.07	33.908	7.72	26.847	121.3	0.012				
66	3.49	33.930	7.53	1.63	12.	0.21	22.7	105.9	20	4.57	33.923	7.70	26.891	117.0	0.024				
92	3.29	33.927	7.31	1.63	12.	0.22	23.1	104.3	30	4.30	33.934	7.67	26.929	113.5	0.036				
121	2.24	33.931	7.66	1.78	18.	0.45	25.1	95.4	50	3.01	33.939	7.60	26.984	108.5	0.058				
152	1.72	33.941	7.66	1.86	20.	0.16	26.6	90.8	75	3.44	33.930	7.43	27.013	105.5	0.085				
181	2.05	34.010	7.42	1.84	18.	0.04	26.3	88.0	100	3.02	33.927	7.39	27.050	102.0	0.111				
211	1.70	33.998	7.35	1.88	19.	0.02	27.2	86.4	125	2.13	33.932	7.66	27.128	94.6	0.136				
241	1.53	34.000	7.29	1.93	23.	0.02	27.9	85.1	150	1.73	33.941	7.66	27.166	91.0	0.159				
271	1.45	34.042	6.91	2.01	27.	0.02	29.3	81.3	200	1.06	34.007	7.35	27.210	86.9	0.204				
311	1.59	34.119	6.37	2.10	33.	0.02	31.1	76.4	250	1.49	34.011	7.19	27.239	84.1	0.247				
350	1.50	34.159	6.03	2.20	39.	0.02	32.1	72.8	300	1.55	34.100	6.51	27.306	77.7	0.288				
400	1.643	34.229	5.55	2.30	47.	0.02	33.4	68.4	400	1.64	34.229	5.55	27.404	68.4	0.362				
450	1.896	34.314	5.04	2.38	54.	0.01	34.2	63.8	500	2.10	34.367	4.71	27.479	61.3	0.428				
524	2.170	34.385	4.60	2.41	61.	0.01	34.9	60.5	600	2.22	34.437	4.33	27.525	56.9	0.490				
599	2.221	34.436	4.33	2.43	68.	0.01	35.2	57.0	700	2.15	34.467	4.23	27.571	52.6	0.548				
700	2.151	34.487	4.23	2.45	72.	0.01	35.2	52.6	800	2.24	34.557	4.05	27.619	48.0	0.602				
799	2.240	34.556	4.05	2.43	79.	0.02	35.3	48.1	1000	2.24	34.623	4.01	27.671	43.1	0.702				
901	2.253	34.591	4.04	2.43	82.	0.01	34.9	45.5	1200	2.19	34.660	4.07	27.706	39.8	0.797				
1003	2.241	34.623	4.01	2.58	82.	0.01	34.5	43.0	1500	2.08	34.715	4.25	27.758	34.9	0.928				
1106	2.160	34.639	4.09	2.37	86.	0.00	34.2	41.2	1750	1.84	34.718	4.19	27.780	32.9	1.031				
1217A	2.19	K 34.663	4.06	2.34	88.	0.00		39.6	2000	1.60	34.718	4.40	27.798	31.0	1.129				
1315	2.07	34.673	4.07	2.31	90.	0.00	33.6	37.9	2250	1.61	34.750	4.66	27.823	28.7	1.223				
1421A	2.03	34.691	4.09	2.30	95.	0.00	32.5	36.2	2500	1.36	34.734	4.64	27.828	28.2	1.314				
1522A	2.10	34.721	4.30	2.23	91.	0.00	31.3	34.5	2750	1.18	34.721	4.71	27.830	28.1	1.402				
1625A	2.09	34.735	4.45	2.18	91.	0.00	30.9	33.4	3000	1.02	34.716	4.79	27.837	27.4	1.488				
1751A	1.84	34.717	4.19	2.21	100.	0.00	31.6	32.9	3250	0.80	34.706	4.87	27.843	26.8	1.570				
1878A	1.72	34.716	4.34	2.25	103.	0.01	31.8	32.1	3500	0.61	34.694	4.95	27.845	26.7	1.648				
2005A	1.60	34.719	4.40	2.26	107.	0.00	31.8	31.0	3750	0.46	34.688	5.04	27.849	26.3	1.722				
2133A	1.56	34.739	4.49	2.21	107.	0.00	31.6	29.2	4000	0.33	34.681	5.10	27.851	26.1	1.792				
2284A	1.62	34.752	4.70	2.12	99.	0.00	30.2	28.6	4250	0.25	34.678	5.17	27.853	25.9	1.859				
2438A	1.42	34.738	4.63	2.18	106.	0.01	30.7	28.3	4500	0.21	34.675	5.20	27.853	25.9	1.925				
2615A	1.26	34.726	4.67	2.20	112.	0.01	31.3	28.2	4750	0.20	34.672	5.24	27.851	26.1	1.990				
2793A	1.16	34.719	4.73	2.20	115.	0.01	31.4	28.0	5000	0.20	34.671	5.24	27.850	26.2	2.056				
2996A	1.02	34.716	4.79	2.23	118.	0.01	31.9	27.4	5250	0.21	34.666	5.23	27.846	26.6	2.122				
3199A	0.856	34.710	4.84	2.24	119.	0.01	30.8	26.8	5500	0.24	34.669	5.30	27.847	26.5	2.189				
3401A	0.662	34.695	4.94	2.26	123.	0.01	32.2	26.8											
3605A	0.566	34.692	4.97	2.27	124.	0.00	32.3	26.5											
3807A	0.422	34.685	5.07	2.30	126.	0.01	32.4	26.2											
4010A	0.323	34.680	5.10	2.31	128.	0.01	32.6	26.1											
4263A	0.245	34.677	5.17	2.35	128.	0.01	32.6	25.9											
4516A	0.209	34.674	5.20	2.32	129.	0.00	32.4	25.9											
4770A	0.202	34.671	5.24	2.33	129.	0.00	32.6	26.1											
5022A	0.195	34.670	5.24	2.31	130.	0.00	32.6	26.2											
5275A	0.209	34.665	5.23	2.31	129.	0.00	32.7	26.6											
5477A	0.24	34.669	5.29	2.32	130.	0.00	32.8	26.5											

17 S						INDOMED LEG XIII CTD						17 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
48 40.1S	41 21.4W	12/23/78	0315 GMT			48 38.9S	41 22.3W	11/22/78	2340 GMT			48 38.9S	41 22.3W	11/22/78	2340 GMT		
Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU
0	5.149	33.893	26.804	125.3	0.000	0	5.191	33.898	26.803	125.4	0.000	0	5.191	33.898	26.803	125.4	0.000
10	5.137	33.894	26.806	125.1	0.013	10	5.187	33.902	26.807	125.1	0.013	10	5.187	33.902	26.807	125.1	0.013
20	4.166	33.942	26.943	112.1	0.024	20	5.003	33.895	26.822	123.6	0.025	20	5.003	33.895	26.822	123.6	0.025
30	3.944	33.946	26.977	108.9	0.035	30	4.419	33.912	26.900	116.2	0.037	30	4.419	33.912	26.900	116.2	0.037
40	3.832	33.955	26.995	107.2	0.046	40	4.095	33.927	26.946	111.8	0.048	40	4.095	33.927	26.946	111.8	0.048
50	3.649	33.951	27.010	105.8	0.057	50	3.919	33.941	26.976	109.1	0.060	50	3.919	33.941	26.976	109.1	0.060
75	3.412	33.936	27.021	104.7	0.083	75	3.491	33.936	27.014	105.4	0.086	75	3.491	33.936	27.014	105.4	0.086
100	3.109	33.930	27.045	102.5	0.109	100	3.262	33.937	27.036	103.3	0.113	100	3.262	33.937	27.036	103.3	0.113
125	1.818	33.939	27.159	91.7	0.134	125	1.829	33.939	27.158	91.8	0.137	125	1.829	33.939	27.158	91.8	0.137
150	1.529	33.944	27.184	89.3	0.157	150	2.431	34.046	27.196	88.1	0.160	150	2.431	34.046	27.196	88.1	0.160
175	1.832	33.991	27.200	87.8	0.179	175	2.042	34.023	27.209	86.9	0.182	175	2.042	34.023	27.209	86.9	0.182
200	1.472	33.977	27.214	86.4	0.201	200	1.838	34.018	27.221	85.8	0.204	200	1.838	34.018	27.221	85.8	0.204
225	1.393	33.985	27.226	85.3	0.222	225	1.833	34.045	27.243	83.7	0.225	225	1.833	34.045	27.243	83.7	0.225
250	1.324	34.001	27.244	83.6	0.244	250	1.935	34.070	27.255	82.6	0.246	250	1.935	34.070	27.255	82.6	0.246
275	1.317	34.037	27.273	80.8	0.264	275	1.993	34.113	27.285	79.7	0.267	275	1.993	34.113	27.285	79.7	0.267
300	1.283	34.072	27.304	78.0	0.284	300	1.846	34.126	27.306	77.7	0.287	300	1.846	34.126	27.306	77.7	0.287
350	1.578	34.161	27.354	73.2	0.322	350	1.473	34.142	27.346	73.9	0.325	350	1.473	34.142	27.346	73.9	0.325
400	1.640	34.236	27.410	67.9	0.358	400	1.567	34.207	27.392	69.6	0.361	400	1.567	34.207	27.392	69.6	0.361
450	1.862	34.306	27.449	64.2	0.392	450	1.991	34.309	27.442	64.9	0.396	450	1.991	34.309	27.442	64.9	0.396
500	2.006	34.357	27.479	61.4	0.424	500	2.189	34.372	27.476	61.6	0.428	500	2.189	34.372	27.476	61.6	0.428
550	2.103	34.406	27.510	58.4	0.456	550	2.134	34.393	27.497	59.6	0.460	550	2.134	34.393	27.497	59.6	0.460
600	2.208	34.449	27.536	55.9	0.485	600	2.140	34.427	27.524	57.1	0.490	600	2.140	34.427	27.524	57.1	0.490
650	2.149	34.470	27.558	53.9	0.514	650	2.178	34.458	27.546	55.0	0.520	650	2.178	34.458	27.546	55.0	0.520
700	2.152	34.498	27.580	51.8	0.542	700	2.150	34.483	27.568	52.9	0.549	700	2.150	34.483	27.568	52.9	0.549
750	2.231	34.537	27.605	49.4	0.570	750	2.182	34.518	27.593	50.5	0.576	750	2.182	34.518	27.593	50.5	0.576
800	2.238	34.564	27.626	47.4	0.596	800	2.288	34.552	27.612	48.7	0.603	800	2.288	34.552	27.612	48.7	0.603
850	2.203	34.576	27.638	46.3	0.621	850	2.238	34.560	27.622	47.7	0.629	850	2.238	34.560	27.622	47.7	0.629
900	2.242	34.598	27.652	44.9	0.646	900	2.253	34.587	27.643	45.8	0.655	900	2.253	34.587	27.643	45.8	0.655
950	2.231	34.613	27.665	43.7	0.671	950	2.251	34.597	27.651	45.0	0.680	950	2.251	34.597	27.651	45.0	0.680
1000	2.234	34.626	27.675	42.7	0.695	1000	2.247	34.619	27.669	43.3	0.704	1000	2.247	34.619	27.669	43.3	0.704
1100	2.165	34.641	27.693	41.0	0.742	1100	2.171	34.637	27.689	41.4	0.752	1100	2.171	34.637	27.689	41.4	0.752
1200	2.129	34.659	27.710	39.4	0.788	1200	2.131	34.658	27.709	39.5	0.798	1200	2.131	34.658	27.709	39.5	0.798
1300	2.070	34.677	27.729	37.6	0.832	1300	2.085	34.671	27.723	38.2	0.843	1300	2.085	34.671	27.723	38.2	0.843
1316	2.068	34.679	27.731	37.4	0.839	1400	2.058	34.692	27.742	36.4	0.887	1400	2.058	34.692	27.742	36.4	0.887
						1500	2.125	34.728	27.766	34.2	0.929	1500	2.125	34.728	27.766	34.2	0.929
						1600	1.987	34.719	27.770	33.8	0.970	1600	1.987	34.719	27.770	33.8	0.970
						1700	2.028	34.741	27.784	32.4	1.011	1700	2.028	34.741	27.784	32.4	1.011
						1800	1.791	34.716	27.782	32.6	1.051	1800	1.791	34.716	27.782	32.6	1.051
						1900	1.709	34.719	27.791	31.8	1.091	1900	1.709	34.719	27.791	31.8	1.091
						2000	1.635	34.720	27.797	31.2	1.130	2000	1.635	34.720	27.797	31.2	1.130
						2100	1.565	34.721	27.803	30.6	1.168	2100	1.565	34.721	27.803	30.6	1.168
						2200	1.696	34.752	27.818	29.2	1.206	2200	1.696	34.752	27.818	29.2	1.206
						2300	1.608	34.750	27.823	28.7	1.243	2300	1.608	34.750	27.823	28.7	1.243
						2400	1.488	34.741	27.825	28.6	1.280	2400	1.488	34.741	27.825	28.6	1.280
						2500	1.466	34.738	27.828	28.2	1.316	2500	1.466	34.738	27.828	28.2	1.316
						2600	1.306	34.728	27.828	28.3	1.352	2600	1.306	34.728	27.828	28.3	1.352
						2700	1.221	34.725	27.831	28.0	1.387	2700	1.221	34.725	27.831	28.0	1.387
						2800	1.165	34.722	27.832	27.8	1.422	2800	1.165	34.722	27.832	27.8	1.422
						2900	1.085	34.717	27.834	27.7	1.457	2900	1.085	34.717	27.834	27.7	1.457
						3000	1.008	34.714	27.837	27.5	1.490	3000	1.008	34.714	27.837	27.5	1.490
						3100	0.946	34.712	27.839	27.2	1.524	3100	0.946	34.712	27.839	27.2	1.524
						3200	0.874	34.709	27.841	27.0	1.557	3200	0.874	34.709	27.841	27.0	1.557
						3300	0.805	34.706	27.843	26.8	1.589	3300	0.805	34.706	27.843	26.8	1.589
						3400	0.697	34.698	27.844	26.8	1.620	3400	0.697	34.698	27.844	26.8	1.620
						3500	0.620	34.694	27.845	26.6	1.651	3500	0.620	34.694	27.845	26.6	1.651
						3600	0.577	34.692	27.846	26.5	1.681	3600	0.577	34.692	27.846	26.5	1.681
						3700	0.528	34.690	27.847	26.4	1.711	3700	0.528	34.690	27.847	26.4	1.711
						3800	0.426	34.685	27.849	26.2	1.740	3800	0.426	34.685	27.849	26.2	1.740
						3900	0.381	34.681	27.849	26.3	1.768	3900	0.381	34.681	27.849	26.3	1.768
						4000	0.324	34.680	27.851	26.1	1.796	4000	0.324	34.680	27.851	26.1	1.796
						4100	0.290	34.678	27.851	26.0	1.823	4100	0.290	34.678	27.851	26.0	1.823
						4200	0.267	34.675	27.850	26.1	1.850	4200	0.267	34.675	27.850	26.1	1.850
						4300	0.249	34.675	27.851	26.0	1.877	4300	0.249	34.675	27.851	26.0	1.877
						4400	0.232	34.673	27.851	26.1	1.904	4400	0.232	34.673	27.851	26.1	1.904
						4500	0.219	34.671	27.850	26.2	1.930	4500	0.219	34.671	27.850	26.2	1.930
						4600	0.207	34.670	27.850	26.2	1.957	4600	0.207	34.670	27.850	26.2	1.957
						4700	0.201	34.668	27.848	26.3	1.983	4700	0.201	34.668	27.848	26.3	1.983
						4800	0.200	34.667	27.848	26.4	2.009	4800	0.200	34.667	27.848	26.4	2.009
						4900	0.192	34.666	27.847	26.4	2.036	4900	0.192	34.666	27.847	26.4	2.036
						5000	0.192	34.665	27.846	26.5	2.062	5000	0.192	34.665	27.846	26.5	2.062
						5100	0.199	34.664	27.845	26.6	2.089	5100	0.199	34.664	27.845	26.6	2.089
						5200	0.205										

RV MELVILLE

INNOVED L&W XIII

19

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
49 08. S		41 01. W		11/23/78		1058 1446		GMT		5207M		29U		23KT		2		290 5 5	
L	T	S	O2	P04	S103	N02	N03	DT	L	I	S	O2	S14T	UT	DD				
0	5.28	34.011	7.78	1.24	2.	0.18	17.7	117.9	0	5.28	34.011	7.78	26.882	117.9	0.000				
42	4.40	34.023	7.42	1.55	8.	0.17	21.6	107.6	10	5.09	34.008	7.70	26.901	116.1	0.012				
67	3.78	34.067	7.18	1.68	11.	0.67	23.4	98.3	20	4.89	34.009	7.62	26.925	113.9	0.023				
93	3.43	34.114	7.01	1.78	13.	0.03	25.6	91.5	30	4.67	34.013	7.53	26.952	111.3	0.035				
123	3.28	34.126	6.78	1.82	13.	0.02	26.5	89.2	50	4.19	34.036	7.34	27.022	104.6	0.056				
154	3.00	34.119	6.76	1.89	17.	0.00	27.2	87.3	75	3.65	34.084	7.12	27.116	93.8	0.081				
184	2.29	34.065	7.12	1.87	18.	0.00	26.9	85.6	100	3.39	34.121	6.95	27.170	90.6	0.105				
214	2.16	34.070	7.00	1.96	19.	0.00	27.8	84.2	125	3.27	34.128	6.78	27.186	89.1	0.127				
244	2.52	34.125	6.52	2.01	23.	0.00	28.6	82.9	150	3.05	34.123	6.76	27.203	87.5	0.150				
275	2.57	34.149	6.32	2.06	26.	0.00	29.1	81.5	200	2.22	34.069	7.06	27.231	84.9	0.193				
316	2.50	34.169	6.09	2.09	30.	0.00	30.3	79.4	250	2.93	34.131	6.47	27.255	82.6	0.236				
356	2.27	34.179	5.99	2.15	33.	0.00	30.8	76.8	300	2.53	34.162	6.17	27.280	80.2	0.277				
407	2.00	34.201	5.78	2.24	39.	0.01	31.9	73.1	400	2.02	34.196	5.83	27.349	73.7	0.356				
458	2.43	34.305	5.00	2.33	49.	0.00	33.6	68.3	500	2.42	34.338	4.77	27.429	66.0	0.428				
534	2.42	34.361	4.70	2.39	56.	0.00	34.2	64.2	600	2.47	34.425	4.40	27.495	59.8	0.494				
611	2.47	34.434	4.36	2.43	64.	0.00	34.8	59.1	700	2.29	34.476	4.21	27.551	54.5	0.554				
712	2.26	34.480	4.20	2.46	72.	0.00	35.3	54.0	800	2.29	34.537	4.04	27.600	49.9	0.610				
812	2.29	34.544	4.03	2.45	77.	0.00	34.9	49.4	1000	2.43	34.634	4.10	27.664	43.6	0.714				
913	2.55	34.629	4.16	2.30	72.	0.00	33.1	45.0	1200	2.45	34.710	4.31	27.723	38.1	0.808				
936A	2.61	34.642	4.18	2.30	70.	0.00	32.7	44.5	1500	2.26	34.750	4.49	27.772	33.5	0.938				
1013	2.37	34.630	4.08	2.32	79.	0.00	33.7	43.5	1750	2.09	34.769	4.63	27.801	30.8	1.039				
1139A	2.20	34.652	4.04	2.38	86.	0.00	34.0	40.5	2000	1.92	34.771	4.72	27.816	29.4	1.136				
1241A	2.61	34.746	4.49	2.08	68.	0.00	30.2	36.6	2250	1.62	34.756	4.73	27.827	28.3	1.229				
1343A	2.43	34.745	4.44	2.07	74.	0.01	30.6	35.3	2500	1.31	34.738	4.74	27.834	27.7	1.318				
1470A	2.29	34.749	4.48	2.10	78.	0.00	30.6	33.8	2750	1.03	34.714	4.66	27.835	27.6	1.404				
1595A	2.19	34.756	4.53	2.12	78.	0.00	30.6	32.5	3000	0.80	34.704	4.83	27.842	26.9	1.485				
1724A	2.08	34.762	4.59	2.10	83.	0.00	30.4	31.2	3250	0.64	34.696	4.91	27.844	26.8	1.562				
1851A	2.12	34.789	4.77	2.01	77.	0.00	29.0	29.5	3500	0.44	34.686	5.00	27.848	26.4	1.636				
2004A	1.91	34.770	4.72	2.08	86.	0.00	29.8	29.4	3750	0.33	34.679	5.07	27.849	26.3	1.707				
2155A	1.77	34.770	4.78	2.04	89.	0.00	30.0	28.3	4000	0.28	34.679	5.12	27.852	26.0	1.775				
2333A	1.482	34.744	4.68	2.15	102.	0.01	31.3	28.3	4250	0.21	34.676	5.17	27.854	25.8	1.841				
2512A	1.302	34.736	4.74	2.19	108.	0.00	31.5	27.7	4500	0.16	34.673	5.18	27.854	25.8	1.905				
2715A	1.066	34.713	4.64	2.25	119.	0.00	32.8	27.7	4750	0.16	34.672	5.22	27.853	25.9	1.969				
2919A	0.854	34.708	4.80	2.26	122.	0.00	32.9	27.0	5000	0.16	34.671	5.28	27.852	26.0	2.033				
3121A	0.723	34.699	4.87	2.29	124.	0.00	32.9	26.9											
3325A	0.611	34.693	4.93	2.32	125.	0.00	32.9	26.7											
3529A	0.432	34.684	5.01	2.30	126.	0.01	32.9	26.3											
3731A	0.336	34.678	5.07	2.34	127.	0.00	33.2	26.3											
3983A	0.280	34.678	5.12	2.34	128.	0.00	33.2	26.0											
4235A	0.209	34.675	5.17	2.33	129.	0.00	33.0	25.8											
4488A	0.161	34.672	5.18	2.34	130.	0.01	33.1	25.8											
4739A	0.162	34.671	5.15U	2.34	131.	0.01	33.2	25.9											
4991A	0.158	34.670	5.28	2.33	130.	0.00	33.0	26.0											
5190A	0.114	34.663	5.34	2.30	129.	0.01	32.9	26.3											

19 S						INDOORLED LEG XIII CTU						19 D					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			
49 07.55		41 21.4W		11/23/78		1408 GMT		49 08. S		41 21. W		11/23/78		0917 GMT			
Z	T	S	SIGMA T	DT	DD			Z	T	S	SIGMA T	DT	DD				
0	5.251	34.012	26.886	117.6	0.000			0	5.252	34.009	26.884	117.8	0.000				
10	5.209	34.015	26.893	116.8	0.012			10	5.254	34.006	26.881	118.0	0.012				
20	5.231	34.014	26.890	117.2	0.023			20	5.245	34.009	26.884	117.7	0.024				
30	5.196	34.013	26.893	116.9	0.035			30	5.157	34.014	26.899	116.5	0.035				
40	4.524	34.026	26.979	108.7	0.046			40	4.726	34.043	26.971	109.5	0.047				
50	4.325	34.023	26.999	106.9	0.057			50	4.220	34.023	27.010	105.8	0.057				
75	3.602	34.087	27.123	95.1	0.083			75	3.555	34.096	27.135	94.0	0.083				
100	3.380	34.125	27.175	90.2	0.106			100	3.385	34.123	27.175	90.4	0.106				
125	3.213	34.125	27.190	86.7	0.129			125	3.221	34.124	27.189	88.8	0.128				
150	2.980	34.113	27.202	87.6	0.151			150	3.001	34.118	27.204	87.4	0.151				
175	2.372	34.071	27.221	85.8	0.173			175	2.414	34.074	27.220	85.9	0.173				
200	2.490	34.100	27.234	84.5	0.194			200	2.494	34.098	27.242	84.7	0.194				
225	2.494	34.113	27.244	83.6	0.216			225	2.592	34.109	27.253	84.7	0.216				
250	2.570	34.132	27.253	82.7	0.237			250	2.522	34.114	27.243	83.7	0.237				
275	2.556	34.139	27.260	82.1	0.258			275	2.432	34.124	27.258	82.2	0.258				
300	2.550	34.164	27.280	80.2	0.278			300	2.458	34.145	27.273	80.9	0.279				
350	2.285	34.180	27.315	76.9	0.318			350	2.275	34.176	27.313	77.1	0.319				
400	2.072	34.205	27.352	73.4	0.357			400	2.225	34.216	27.349	73.7	0.358				
450	2.422	34.300	27.400	68.9	0.393			450	2.399	34.268	27.376	71.1	0.395				
500	2.499	34.350	27.433	65.7	0.428			500	2.490	34.338	27.424	66.5	0.430				
550	2.463	34.381	27.461	63.0	0.462			550	2.453	34.365	27.449	64.2	0.465				
600	2.481	34.432	27.500	59.3	0.494			600	2.373	34.398	27.482	61.1	0.497				
650	2.463	34.459	27.523	57.1	0.525			650	2.435	34.452	27.520	57.5	0.529				
700	2.277	34.475	27.551	54.5	0.555			700	2.286	34.473	27.549	54.7	0.559				
750	2.304	34.515	27.581	51.7	0.583			750	2.330	34.509	27.574	52.3	0.587				
800	2.306	34.548	27.607	49.2	0.610			800	2.282	34.534	27.598	50.1	0.615				
850	2.410	34.582	27.626	47.4	0.637			850	2.454	34.579	27.620	48.0	0.642				
900	2.562	34.627	27.649	45.3	0.662			900	2.601	34.619	27.639	46.2	0.666				
950	2.590	34.643	27.659	44.3	0.687			950	2.603	34.640	27.655	44.6	0.693				
1000	2.394	34.631	27.666	43.6	0.712			1000	2.318	34.618	27.662	44.0	0.718				
1022	2.267	34.621	27.669	43.4	0.723			1100	2.226	34.645	27.691	41.2	0.766				
								1200	2.613	34.734	27.730	37.6	0.812				
								1300	2.348	34.716	27.738	36.8	0.856				
								1400	2.337	34.739	27.757	35.0	0.900				
								1500	2.219	34.740	27.768	34.0	0.942				
								1600	2.213	34.755	27.780	32.6	0.983				
								1700	2.075	34.752	27.789	32.0	1.024				
								1800	2.119	34.778	27.806	30.3	1.064				
								1900	2.188	34.801	27.819	29.1	1.103				
								2000	1.894	34.767	27.815	29.5	1.141				
								2100	1.836	34.771	27.823	28.7	1.179				
								2200	1.755	34.770	27.828	28.2	1.216				
								2300	1.548	34.747	27.825	28.5	1.253				
								2400	1.409	34.738	27.828	28.2	1.289				
								2500	1.342	34.740	27.835	27.6	1.325				
								2600	1.145	34.717	27.830	28.1	1.359				
								2700	1.090	34.718	27.834	27.7	1.394				
								2800	0.998	34.714	27.837	27.4	1.427				
								2900	0.884	34.709	27.841	27.1	1.460				
								3000	0.801	34.702	27.840	27.1	1.492				
								3100	0.750	34.703	27.844	26.7	1.523				
								3200	0.668	34.698	27.845	26.6	1.554				
								3300	0.603	34.695	27.847	26.5	1.584				
								3400	0.541	34.691	27.847	26.4	1.614				
								3500	0.438	34.685	27.849	26.3	1.643				
								3600	0.412	34.684	27.849	26.2	1.671				
								3700	0.367	34.681	27.850	26.2	1.699				
								3800	0.311	34.679	27.851	26.1	1.726				
								3900	0.291	34.677	27.851	26.1	1.754				
								4000	0.258	34.676	27.852	26.0	1.781				
								4100	0.239	34.677	27.853	25.8	1.807				
								4200	0.220	34.676	27.854	25.8	1.833				
								4300	0.193	34.675	27.854	25.8	1.859				
								4400	0.164	34.674	27.855	25.7	1.885				
								4500	0.161	34.672	27.854	25.8	1.910				
								4600	0.163	34.671	27.853	25.9	1.936				
								4700	0.165	34.670	27.852	26.0	1.961				
								4800	0.170	34.670	27.852	26.0	1.987				
								4900	0.172	34.669	27.851	26.1	2.013				
								5000	0.160	34.667	27.850	26.2	2.039				
								5100	0.137	34.665	27.849	26.2	2.064				
								5200	0.115	34.664	27.850	26.2	2.090				

NV MELVILLE

INCOMED L&G XIII

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
49 26. S		41 06. W		11/23/78		1934 2322		GMT	4227M	240	18KT	2			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S10T	DT	DD
1	3.95	33.954	7.99	1.40	6.	0.21	20.1	108.4	0	3.95	33.954	7.99	26.983	108.4	0.000
52	2.85	33.943	7.91	1.63	11.	0.21	22.7	99.3	10	3.69	33.948	7.98	27.004	106.4	0.011
93	2.65	33.968	7.63	1.72	14.	0.19	23.8	95.8	20	3.43	33.944	7.96	27.025	104.4	0.021
134	2.09	34.025	7.51	1.82	17.	0.05	26.2	87.1	30	3.21	33.942	7.94	27.044	102.6	0.032
175	1.57	34.006	7.54	1.83	19.	0.03	26.7	84.9	50	2.88	33.944	7.91	27.076	99.6	0.052
226	2.10	34.105	6.84	2.01	24.	0.02	28.5	81.1	75	2.72	33.955	7.75	27.098	97.4	0.077
246	2.07	34.130	6.56	2.05	27.	0.02	29.3	79.0	100	2.57	33.980	7.60	27.132	94.3	0.101
287	1.95	34.151	6.35	2.12	31.	0.01	30.2	76.5	125	2.23	34.015	7.52	27.187	89.0	0.124
328	1.90	34.170	6.29	2.17	34.	0.01	30.6	74.7	150	1.83	34.018	7.52	27.220	85.9	0.146
368	1.89	34.208	5.77	2.22	39.	0.01	31.6	71.8	200	1.80	34.050	7.25	27.248	83.3	0.188
419	1.86	34.247	5.51	2.29	46.	0.02	32.6	68.6	250	2.06	34.134	6.53	27.296	78.7	0.229
470	2.28	34.356	4.66	2.40	55.	0.01	33.6	63.5	300	1.93	34.157	6.33	27.324	76.0	0.268
536	2.331	34.414	4.54	2.42	62.	0.01	34.1	59.5	400	1.87	34.233	5.62	27.389	69.9	0.343
613	2.358	34.475	4.29	2.45	68.	0.01	34.4	55.1	500	2.30	34.386	4.61	27.477	61.5	0.410
715	2.315	34.532	3.81	2.45	74.	0.01	34.4	50.5	600	2.36	34.466	4.34	27.537	55.8	0.472
816	2.252	34.574	4.01	2.42	79.	0.01	34.1	46.8	700	2.32	34.525	3.86	27.587	51.1	0.529
918	2.200	34.608	4.02	2.39	82.	0.01	33.9	43.8	800	2.26	34.570	3.96	27.627	47.3	0.582
1020	2.148	34.636	4.08	2.39	85.	0.02	33.5	41.3	1000	2.16	34.632	4.07	27.686	41.8	0.680
1122	2.086	34.662	4.10	2.35	88.	0.02	33.3	38.9	1200	2.05	34.677	4.12	27.730	37.6	0.770
1224	2.041	34.679	4.13	2.35	90.	0.01	33.0	37.2	1500	1.83	34.717	4.19	27.780	32.9	0.894
1325	1.969	34.691	3.97	2.31	93.	0.00	32.6	35.8	1750	1.65	34.730	4.23	27.804	30.5	0.989
1412A	1.89	34.708	3.87	2.26	95.	0.00	32.6	33.9	2000	1.40	34.721	4.48	27.815	29.5	1.080
1505	1.827	34.716	4.21	2.28	97.	0.00	32.3	32.8	2250	1.21	34.720	4.49	27.828	28.2	1.167
1564A	1.77	34.714	4.25	2.26	98.	0.00	32.4	32.6	2500	0.96	34.715	4.50	27.840	27.1	1.250
1639A	1.73	34.732	4.31	2.26	99.	0.01	32.3	30.9	2750	0.79	34.706	4.77	27.843	26.8	1.329
1716A	1.68		4.15	2.22	100.	0.01	32.3		3000	0.72	34.703	4.79	27.845	26.6	1.406
1796A	1.60		4.36	2.31	103.	0.00	32.2		3250	0.71	34.701	4.74	27.844	26.7	1.483
1867A	1.52	34.724	4.33	2.26	107.	0.00	32.1	30.1	3500	0.68	34.697	4.98	27.843	26.8	1.561
1943A	1.43		4.56	2.27	108.	0.00	32.1								
2019A	1.39	34.721	4.44	2.28	110.	0.01	32.2	29.4							
2094A	1.32		4.45	2.29	111.	0.01	32.0								
2172A	1.26	34.721	4.65	2.26	113.	0.01	32.0	28.5							
2246A	1.21	34.720	4.48	2.25	115.	0.00	32.1	28.3							
2322A	1.123	34.720	4.62	2.28	117.	0.01	32.1	27.7							
2398A	1.058	34.715	4.47	2.28	117.	0.01	32.1	27.7							
2474A	0.991		4.37	2.27	118.	0.00	32.2								
2549A	0.912	34.714	4.77	2.29	119.	0.01	32.1	26.9							
2651A	0.855	34.708	4.76	2.28	121.	0.01	32.3	27.0							
2752A	0.794	34.705	4.77	2.26	121.	0.02	32.3	26.8							
2854A	0.781	34.704	4.170	2.26	121.	0.01	32.3	26.8							
2955A	0.736	34.700	4.74	2.29	123.	0.02	32.3	26.9							
3055A	0.704	34.705	4.85	2.28	121.	0.00	32.0	26.3							
3207A	0.709	34.700	4.72	2.28	122.	0.00	32.3	26.7							
3460A	0.716	34.700	4.83	2.28	121.	0.00	32.2	26.8							
3511A	0.675	34.696	4.99	2.28	123.	0.00	32.2	26.8							
3663A	0.679	34.696	4.96	2.26	123.	0.02	31.9	26.8							

RV MELVILLE

INCOMED L&G XIII

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
49 41.8S		41 07.8W		11/24/78		0406		GMT	1839M	270	18KT	1			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S10T	DT	DD
0	3.81	33.944	7.67	1.46	6.	0.21	20.8	107.8	0	3.81	33.944	7.67	26.989	107.8	0.000
25	3.78	33.944	7.67	1.47	8.	0.22	21.0	107.5	10	3.80	33.945	7.67	26.990	107.7	0.011
51	3.09	33.959	7.68	1.63	12.	0.20	22.8	100.1	20	3.79	33.948	7.67	26.991	107.6	0.022
76	3.00	33.958	7.59	1.68	13.	0.20	23.2	99.5	30	3.65	33.948	7.64	27.007	106.1	0.032
102	2.49	33.991	7.35	1.79	16.	0.16	25.1	92.8	50	3.12	33.960	7.69	27.067	100.4	0.053
132	1.76	33.994	7.51	1.85	18.	0.03	26.3	87.1	75	3.00	33.959	7.59	27.077	99.5	0.078
173	1.62	34.009	7.41	1.91	20.	0.02	27.0	85.0	100	2.54	33.989	7.36	27.141	93.4	0.102
214	2.10	34.120	6.53	2.08	27.	0.01	29.2	80.0	125	1.91	33.996	7.46	27.196	88.2	0.125
254	1.85	34.147	6.28	2.07	32.	0.01	30.5	76.1	150	1.70	34.005	7.47	27.219	85.9	0.147
305	1.90	34.197	5.75	2.22	38.	0.01	31.6	72.7	200	1.94	34.082	6.84	27.263	81.8	0.189
356	2.06	34.243	5.56	2.29	44.	0.01	32.3	70.4	250	1.89	34.147	6.29	27.319	76.5	0.229
433	2.21	34.333	4.84	2.41	54.	0.01	33.7	64.7	300	1.90	34.194	5.80	27.356	73.0	0.267
509	2.34	34.414	4.40	2.44	63.	0.01	34.3	59.6	400	2.15	34.294	5.05	27.416	67.3	0.339
611	2.32	34.479	4.14	2.46	71.	0.01	34.6	54.5	500	2.33	34.406	4.44	27.491	60.1	0.405
713	2.262	34.556	4.03	2.46	78.	0.00	34.4	48.2	600	2.32	34.473	4.16	27.545	55.0	0.465
813	2.207	34.605	3.97	2.45	83.	0.00	33.9	44.1	700	2.27	34.547	4.04	27.609	49.0	0.520
942	2.145	34.641	3.97	2.41	86.	0.01	33.6	40.9	800	2.21	34.601	3.97	27.656	44.5	0.571
1069	2.070	34.668	4.05	2.39	89.	0.01	33.1	38.3	1000	2.11	34.655	4.00	27.708	39.6	0.664
1196	1.971	34.686	4.15	2.35	92.	0.01	32.8	36.2	1200	1.97	34.687	4.15	27.745	36.1	0.750
1322	1.854	34.702	4.16	2.30	96.	0.01	32.4	34.1	1500	1.71	34.718	4.30	27.790	31.9	0.869
1475	1.731	34.716	4.28	2.29	99.	0.00	32.1	32.2	1750	1.52	34.724	4.42	27.809	30.1	0.962
1627	1.611	34.722	4.39	2.24	102.	0.00	31.8	30.8							
1829	1.469	34.722	4.44	2.24	107.	0.00	31.8	29.9							

21 S						INDOMED LEG XIII CTD						21 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
49 26.0S	41 17.0W	11/23/78	2255 GMT			49 26. S	41 16. W	11/23/78	1817 GMT			49 26. S	41 16. W	11/23/78	1817 GMT		
Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU
0	3.966	33.950	26.978	108.8	0.000	0	4.038	33.959	26.978	108.9	0.000	0	4.038	33.959	26.978	108.9	0.000
10	3.972	33.947	26.975	109.1	0.011	10	3.998	33.952	26.976	109.0	0.011	10	3.998	33.952	26.976	109.0	0.011
20	3.969	33.948	26.976	109.0	0.022	20	3.966	33.949	26.977	108.9	0.022	20	3.966	33.949	26.977	108.9	0.022
30	3.897	33.952	26.987	108.0	0.033	30	3.281	33.912	27.015	105.4	0.033	30	3.281	33.912	27.015	105.4	0.033
40	3.665	33.951	27.009	105.9	0.043	40	3.055	33.912	27.035	103.4	0.043	40	3.055	33.912	27.035	103.4	0.043
50	3.295	33.952	27.045	102.5	0.054	50	3.009	33.921	27.047	102.3	0.053	50	3.009	33.921	27.047	102.3	0.053
75	2.795	33.949	27.088	98.4	0.079	75	2.950	33.949	27.074	99.7	0.079	75	2.950	33.949	27.074	99.7	0.079
100	2.694	33.968	27.112	96.1	0.104	100	2.821	33.961	27.095	97.7	0.103	100	2.821	33.961	27.095	97.7	0.103
125	2.425	34.000	27.160	91.6	0.127	125	2.631	33.977	27.124	95.0	0.128	125	2.631	33.977	27.124	95.0	0.128
150	2.054	34.025	27.210	86.9	0.150	150	2.070	34.024	27.208	87.1	0.151	150	2.070	34.024	27.208	87.1	0.151
175	1.645	34.008	27.221	85.2	0.171	175	1.862	34.017	27.218	86.1	0.172	175	1.862	34.017	27.218	86.1	0.172
200	1.904	34.050	27.241	83.9	0.193	200	1.710	34.031	27.241	83.9	0.194	200	1.710	34.031	27.241	83.9	0.194
225	2.072	34.085	27.256	82.4	0.214	225	2.087	34.101	27.268	81.5	0.215	225	2.087	34.101	27.268	81.5	0.215
250	2.146	34.118	27.271	80.5	0.234	250	2.117	34.129	27.288	79.5	0.235	250	2.117	34.129	27.288	79.5	0.235
275	2.033	34.139	27.302	78.1	0.254	275	2.005	34.140	27.305	77.8	0.255	275	2.005	34.140	27.305	77.8	0.255
300	1.979	34.147	27.313	77.1	0.274	300	1.873	34.146	27.320	76.4	0.274	300	1.873	34.146	27.320	76.4	0.274
350	1.909	34.177	27.342	74.3	0.312	350	1.701	34.163	27.347	73.9	0.313	350	1.701	34.163	27.347	73.9	0.313
400	1.764	34.218	27.386	70.1	0.349	400	1.781	34.243	27.405	68.4	0.349	400	1.781	34.243	27.405	68.4	0.349
450	1.993	34.302	27.436	65.4	0.384	450	2.185	34.325	27.459	65.1	0.383	450	2.185	34.325	27.459	65.1	0.383
500	2.340	34.385	27.474	61.8	0.417	500	2.313	34.376	27.469	62.3	0.416	500	2.313	34.376	27.469	62.3	0.416
550	2.353	34.420	27.501	59.2	0.448	550	2.357	34.424	27.504	59.0	0.448	550	2.357	34.424	27.504	59.0	0.448
600	2.378	34.441	27.516	57.8	0.479	600	2.375	34.467	27.537	55.8	0.478	600	2.375	34.467	27.537	55.8	0.478
650	2.361	34.484	27.552	54.5	0.509	650	2.312	34.489	27.560	53.7	0.507	650	2.312	34.489	27.560	53.7	0.507
700	2.323	34.512	27.577	52.0	0.537	700	2.297	34.523	27.588	51.0	0.535	700	2.297	34.523	27.588	51.0	0.535
750	2.298	34.536	27.598	50.0	0.565	750	2.291	34.548	27.608	49.1	0.562	750	2.291	34.548	27.608	49.1	0.562
800	2.276	34.562	27.621	47.9	0.591	800	2.267	34.572	27.630	47.1	0.588	800	2.267	34.572	27.630	47.1	0.588
850	2.265	34.573	27.630	47.0	0.617	850	2.244	34.590	27.646	45.3	0.613	850	2.244	34.590	27.646	45.3	0.613
900	2.215	34.600	27.656	44.5	0.642	900	2.213	34.601	27.657	44.4	0.640	900	2.213	34.601	27.657	44.4	0.640
950	2.193	34.616	27.671	43.2	0.666	950	2.204	34.613	27.667	43.5	0.662	950	2.204	34.613	27.667	43.5	0.662
1000	2.165	34.630	27.684	41.9	0.690	1000	2.185	34.626	27.679	42.3	0.686	1000	2.185	34.626	27.679	42.3	0.686
1100	2.090	34.661	27.715	39.0	0.736	1100	2.124	34.655	27.708	39.7	0.732	1100	2.124	34.655	27.708	39.7	0.732
1200	2.044	34.677	27.731	37.4	0.779	1200	2.044	34.680	27.734	37.2	0.776	1200	2.044	34.680	27.734	37.2	0.776
1300	2.005	34.686	27.742	36.4	0.822	1300	1.972	34.692	27.749	35.7	0.818	1300	1.972	34.692	27.749	35.7	0.818
1400	1.907	34.700	27.761	34.6	0.864	1400	1.918	34.700	27.760	34.7	0.860	1400	1.918	34.700	27.760	34.7	0.860
1500	1.826	34.709	27.774	33.4	0.904	1500	1.836	34.707	27.772	33.6	0.900	1500	1.836	34.707	27.772	33.6	0.900

23						24						25					
LATITUDE		LONGITUDE		MO/DAT/YR		START TIME											
49 42.1S		41 17.5W		11/24/78		0252 GMT											
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	3.838	33.950	26.991	107.6	0.000	0	3.838	33.950	26.991	107.6	0.000	0	3.838	33.950	26.991	107.6	0.000
10	3.847	33.948	26.988	107.8	0.011	10	3.847	33.948	26.988	107.8	0.011	10	3.847	33.948	26.988	107.8	0.011
20	3.840	33.948	26.989	107.8	0.022	20	3.840	33.948	26.989	107.8	0.022	20	3.840	33.948	26.989	107.8	0.022
30	3.836	33.948	26.990	107.7	0.032	30	3.836	33.948	26.990	107.7	0.032	30	3.836	33.948	26.990	107.7	0.032
40	3.660	33.950	27.009	105.9	0.043	40	3.660	33.950	27.009	105.9	0.043	40	3.660	33.950	27.009	105.9	0.043
50	3.139	33.963	27.068	100.3	0.053	50	3.139	33.963	27.068	100.3	0.053	50	3.139	33.963	27.068	100.3	0.053
75	3.019	33.964	27.080	99.2	0.078	75	3.019	33.964	27.080	99.2	0.078	75	3.019	33.964	27.080	99.2	0.078
100	2.771	33.980	27.115	95.9	0.103	100	2.771	33.980	27.115	95.9	0.103	100	2.771	33.980	27.115	95.9	0.103
125	1.951	34.005	27.202	87.6	0.126	125	1.951	34.005	27.202	87.6	0.126	125	1.951	34.005	27.202	87.6	0.126
150	1.663	34.004	27.222	85.7	0.148	150	1.663	34.004	27.222	85.7	0.148	150	1.663	34.004	27.222	85.7	0.148
175	1.682	34.026	27.239	84.1	0.169	175	1.682	34.026	27.239	84.1	0.169	175	1.682	34.026	27.239	84.1	0.169
200	2.159	34.115	27.273	80.8	0.190	200	2.159	34.115	27.273	80.8	0.190	200	2.159	34.115	27.273	80.8	0.190
225	2.005	34.149	27.305	77.9	0.210	225	2.005	34.149	27.305	77.9	0.210	225	2.005	34.149	27.305	77.9	0.210
250	1.850	34.154	27.329	75.6	0.229	250	1.850	34.154	27.329	75.6	0.229	250	1.850	34.154	27.329	75.6	0.229
275	1.843	34.170	27.342	74.3	0.248	275	1.843	34.170	27.342	74.3	0.248	275	1.843	34.170	27.342	74.3	0.248
300	1.929	34.208	27.366	72.1	0.267	300	1.929	34.208	27.366	72.1	0.267	300	1.929	34.208	27.366	72.1	0.267
350	2.146	34.279	27.405	68.3	0.303	350	2.146	34.279	27.405	68.3	0.303	350	2.146	34.279	27.405	68.3	0.303
400	2.243	34.328	27.437	65.4	0.357	400	2.243	34.328	27.437	65.4	0.357	400	2.243	34.328	27.437	65.4	0.357
450	2.359	34.394	27.480	61.2	0.370	450	2.359	34.394	27.480	61.2	0.370	450	2.359	34.394	27.480	61.2	0.370
500	2.357	34.428	27.507	58.7	0.401	500	2.357	34.428	27.507	58.7	0.401	500	2.357	34.428	27.507	58.7	0.401
550	2.317	34.459	27.535	56.0	0.431	550	2.317	34.459	27.535	56.0	0.431	550	2.317	34.459	27.535	56.0	0.431
600	2.309	34.503	27.571	52.6	0.460	600	2.309	34.503	27.571	52.6	0.460	600	2.309	34.503	27.571	52.6	0.460
650	2.244	34.532	27.599	49.9	0.487	650	2.244	34.532	27.599	49.9	0.487	650	2.244	34.532	27.599	49.9	0.487
700	2.271	34.558	27.618	48.1	0.514	700	2.271	34.558	27.618	48.1	0.514	700	2.271	34.558	27.618	48.1	0.514
750	2.249	34.581	27.638	46.2	0.539	750	2.249	34.581	27.638	46.2	0.539	750	2.249	34.581	27.638	46.2	0.539
800	2.232	34.604	27.658	44.4	0.563	800	2.232	34.604	27.658	44.4	0.563	800	2.232	34.604	27.658	44.4	0.563
850	2.199	34.619	27.673	43.0	0.587	850	2.199	34.619	27.673	43.0	0.587	850	2.199	34.619	27.673	43.0	0.587
900	2.180	34.632	27.685	41.8	0.611	900	2.180	34.632	27.685	41.8	0.611	900	2.180	34.632	27.685	41.8	0.611
950	2.147	34.645	27.698	40.6	0.634	950	2.147	34.645	27.698	40.6	0.634	950	2.147	34.645	27.698	40.6	0.634
1000	2.125	34.655	27.707	39.7	0.656	1000	2.125	34.655	27.707	39.7	0.656	1000	2.125	34.655	27.707	39.7	0.656
1100	2.069	34.672	27.726	38.0	0.700	1100	2.069	34.672	27.726	38.0	0.700	1100	2.069	34.672	27.726	38.0	0.700
1200	1.977	34.691	27.748	35.8	0.742	1200	1.977	34.691	27.748	35.8	0.742	1200	1.977	34.691	27.748	35.8	0.742
1300	1.882	34.704	27.766	34.2	0.783	1300	1.882	34.704	27.766	34.2	0.783	1300	1.882	34.704	27.766	34.2	0.783
1400	1.794	34.715	27.781	32.7	0.822	1400	1.794	34.715	27.781	32.7	0.822	1400	1.794	34.715	27.781	32.7	0.822
1500	1.709	34.720	27.792	31.7	0.860	1500	1.709	34.720	27.792	31.7	0.860	1500	1.709	34.720	27.792	31.7	0.860
1600	1.648	34.725	27.800	30.9	0.897	1600	1.648	34.725	27.800	30.9	0.897	1600	1.648	34.725	27.800	30.9	0.897
1700	1.550	34.728	27.810	30.0	0.934	1700	1.550	34.728	27.810	30.0	0.934	1700	1.550	34.728	27.810	30.0	0.934
1800	1.475	34.727	27.815	29.5	0.969	1800	1.475	34.727	27.815	29.5	0.969	1800	1.475	34.727	27.815	29.5	0.969
1839	1.478	34.726	27.814	29.6	0.983	1839	1.478	34.726	27.814	29.6	0.983	1839	1.478	34.726	27.814	29.6	0.983

RV MELVILLE

INCOMED L&G XIII

24

LATITUDE 49 30.6S			LONGITUDE 39 08.0W			MO/DAY/YR 11/24/78			MESSENGER TIME 1331 1748 GMT			BOTTOM 4059M			WIND 320 27KT			WEATHER 1			DOMINANT WAVES 320 8 6		
Z	T	S	O2	P04	SI03	N02	N03	DT	Z	T	S	O2	SI07	DT	DD								
1	2.69	33.878	8.48	1.19	2.	0.26	17.8	102.9	0	2.69	33.878	8.48	27.041	102.9	0.000								
33	2.45	33.878	8.41	1.24	2.	0.28	18.6	101.0	10	2.62	33.879	8.46	27.046	102.4	0.010								
63	1.71	33.880	8.12	1.47	4.	0.33	20.6	95.4	20	2.55	33.879	8.44	27.052	101.8	0.020								
94	1.60	33.881	8.00	1.48	5.	0.34	20.9	94.6	30	2.47	33.879	8.42	27.059	101.2	0.031								
124	0.83	33.928	7.94	1.89	22.	0.25	25.8	86.2	50	2.02	33.880	8.25	27.095	97.8	0.051								
154	0.47	34.036	7.32	2.14	39.	0.14	29.8	75.9	75	1.67	33.880	8.06	27.121	95.2	0.075								
184	0.89	34.203	6.10	2.29	52.	0.13	32.5	65.6	100	1.46	33.887	7.99	27.142	93.3	0.098								
215	1.18	34.307	5.41	2.40	61.	0.10	33.8	59.5	125	0.81	33.932	7.93	27.221	85.8	0.121								
256	1.44	34.405	4.88	2.47	69.	0.06	34.5	53.7	150	0.48	34.020	7.44	27.310	77.3	0.141								
306	1.63	34.485	4.65	2.47	75.	0.02	34.5	48.9	200	1.05	34.264	5.69	27.472	62.0	0.176								
367	1.76	34.544	4.33	2.44	81.	0.03	34.4	45.4	250	1.41	34.394	4.93	27.552	54.4	0.205								
438	1.84	34.599	4.28	2.42	84.	0.01	33.9	41.8	300	1.61	34.478	4.67	27.605	49.4	0.232								
518	1.817	34.634	4.31	2.37	88.	0.00	33.5	39.0	400	1.81	34.573	4.31	27.666	43.6	0.280								
610	1.839	34.673	4.29	2.34	93.	0.00	33.0	36.2	500	1.83	34.628	4.30	27.709	39.5	0.323								
712	1.790	34.690	4.32	2.33	95.	0.00	32.7	34.5	600	1.84	34.670	4.29	27.742	36.4	0.363								
813	1.690	34.700	4.41	2.29	97.	0.00	32.5	33.1	700	1.80	34.690	4.31	27.760	34.7	0.402								
885A	1.66	34.709	4.33	2.27	96.	0.00	32.4	32.2	800	1.70	34.699	4.40	27.775	33.2	0.439								
1044	1.462	34.713	4.60	2.29	103.	0.00	32.1	30.5	1000	1.52	34.714	4.52	27.800	30.9	0.510								
1137A	1.40		4.52						1200	1.48	34.719	4.54	27.814	29.5	0.577								
1262A	1.37	34.722	2.26	107.	0.01	32.1	29.2		1500	1.07	34.712	4.69	27.831	28.0	0.675								
1389A	1.15	34.712	4.60	2.25	109.	0.01	32.1	28.5	1750	0.80	34.705	4.86	27.840	27.1	0.751								
1514A	1.06	34.712	4.70	2.26	114.	0.00	32.2	27.9	2000	0.64	34.694	4.92	27.844	26.8	0.825								
1640A	0.92	34.710	4.77	2.27	115.	0.01	32.1	27.2	2250	0.49	34.689	4.97	27.848	26.3	0.897								
1765A	0.79	34.701	4.87	2.26	118.	0.00	32.2	27.1	2500	0.39	34.684	4.99	27.850	26.2	0.966								
1892A	0.70	34.698	4.86	2.26	120.	0.00	32.4	26.8	2750	0.27	34.678	5.14	27.851	26.0	1.034								
2018A	0.63	34.693	4.93	2.26	120.	0.00	32.3	26.8	3000	0.18	34.674	5.20	27.854	25.8	1.100								
2144A	0.54	34.690	4.98	2.29	122.	0.01	32.4	26.5	3250	0.08	34.671	5.27	27.857	25.5	1.163								
2270A	0.48	34.688	4.97	2.28	122.	0.01	32.4	26.3															
2399A	0.43	34.684	5.03	2.31	123.	0.01	32.4	26.3															
2526A	0.379	34.683	4.99	2.32	123.	0.01	32.6	26.1															
2654A	0.323	34.680	5.13	2.31	124.	0.00	32.5	26.1															
2782A	0.259	34.676	5.14	2.31	125.	0.00	32.6	26.0															
2911A	0.218	34.675	5.21	2.32	125.	0.00	32.6	25.9															
3040A	0.163	34.673	5.20	2.30	127.	0.01	32.6	25.8															
3148A	0.118	34.672	5.25	2.32	128.	0.01	32.6	25.6															
3278A	0.071	34.670	5.27	2.34	129.	0.01	32.6	25.5															
3409A	0.043	34.672	5.25	2.32	130.	0.01	32.7	25.2															

24 S						INDOMED LEG XIII CTD						24 N					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE	MO/DAY/YR	START TIME	LATITUDE	LONGITUDE
49 30.6S	39 29.4W	11/24/78	1708 GMT	49 30.7S	39 27.9W	11/24/78	1207 GMT	49 30.7S	39 27.9W	11/24/78	1207 GMT	49 30.7S	39 27.9W	11/24/78	1207 GMT	49 30.7S	39 27.9W
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	2.723	33.679	27.038	103.1	0.000	0	2.643	33.874	27.041	102.8	0.000	0	2.643	33.874	27.041	102.8	0.000
10	2.716	33.877	27.037	103.2	0.010	10	2.624	33.876	27.045	102.5	0.010	10	2.624	33.876	27.045	102.5	0.010
20	2.698	33.876	27.038	103.1	0.021	20	2.663	33.876	27.046	102.4	0.021	20	2.663	33.876	27.046	102.4	0.021
30	2.660	33.876	27.041	102.8	0.031	30	2.517	33.877	27.054	101.6	0.031	30	2.517	33.877	27.054	101.6	0.031
40	2.484	33.877	27.057	101.3	0.041	40	2.377	33.878	27.067	100.4	0.041	40	2.377	33.878	27.067	100.4	0.041
50	2.135	33.878	27.086	98.6	0.051	50	1.934	33.875	27.099	97.4	0.051	50	1.934	33.875	27.099	97.4	0.051
75	1.678	33.884	27.125	94.9	0.075	75	1.698	33.884	27.124	95.0	0.075	75	1.698	33.884	27.124	95.0	0.075
100	1.585	33.885	27.133	94.2	0.099	100	1.630	33.883	27.128	94.6	0.099	100	1.630	33.883	27.128	94.6	0.099
125	0.969	33.919	27.201	87.7	0.122	125	0.887	33.932	27.217	86.2	0.121	125	0.887	33.932	27.217	86.2	0.121
150	0.442	33.997	27.295	78.7	0.143	150	0.458	34.027	27.313	76.5	0.142	150	0.458	34.027	27.313	76.5	0.142
175	0.770	34.163	27.410	67.9	0.161	175	0.795	34.172	27.415	67.4	0.160	175	0.795	34.172	27.415	67.4	0.160
200	1.069	34.271	27.477	61.5	0.177	200	1.116	34.291	27.490	60.3	0.176	200	1.116	34.291	27.490	60.3	0.176
225	1.295	34.343	27.520	57.5	0.192	225	1.313	34.356	27.531	56.4	0.190	225	1.313	34.356	27.531	56.4	0.190
250	1.425	34.396	27.553	54.3	0.206	250	1.429	34.402	27.558	53.9	0.204	250	1.429	34.402	27.558	53.9	0.204
275	1.550	34.446	27.584	51.4	0.220	275	1.552	34.445	27.583	51.4	0.218	275	1.552	34.445	27.583	51.4	0.218
300	1.634	34.478	27.604	49.5	0.233	300	1.624	34.479	27.605	49.4	0.231	300	1.624	34.479	27.605	49.4	0.231
350	1.726	34.531	27.639	46.1	0.257	350	1.729	34.531	27.639	46.2	0.255	350	1.729	34.531	27.639	46.2	0.255
400	1.796	34.570	27.665	43.7	0.280	400	1.776	34.560	27.659	44.3	0.278	400	1.776	34.560	27.659	44.3	0.278
450	1.836	34.604	27.689	41.4	0.303	450	1.842	34.596	27.682	42.0	0.301	450	1.842	34.596	27.682	42.0	0.301
500	1.820	34.625	27.707	39.7	0.324	500	1.830	34.617	27.700	40.4	0.322	500	1.830	34.617	27.700	40.4	0.322
550	1.877	34.650	27.723	38.2	0.344	550	1.822	34.634	27.714	39.0	0.343	550	1.822	34.634	27.714	39.0	0.343
600	1.849	34.672	27.743	36.3	0.364	600	1.870	34.655	27.728	37.8	0.364	600	1.870	34.655	27.728	37.8	0.364
650	1.836	34.683	27.753	35.4	0.384	650	1.865	34.670	27.740	36.6	0.384	650	1.865	34.670	27.740	36.6	0.384
700	1.805	34.687	27.758	34.9	0.403	700	1.847	34.682	27.752	35.4	0.403	700	1.847	34.682	27.752	35.4	0.403
750	1.776	34.694	27.766	34.1	0.421	750	1.785	34.694	27.765	34.2	0.422	750	1.785	34.694	27.765	34.2	0.422
800	1.740	34.699	27.773	33.5	0.440	800	1.744	34.699	27.772	33.5	0.441	800	1.744	34.699	27.772	33.5	0.441
850	1.674	34.704	27.782	32.7	0.458	850	1.664	34.699	27.778	33.0	0.459	850	1.664	34.699	27.778	33.0	0.459
900	1.644	34.708	27.787	32.1	0.476	900	1.631	34.706	27.786	32.2	0.477	900	1.631	34.706	27.786	32.2	0.477
950	1.569	34.709	27.793	31.5	0.494	950	1.608	34.709	27.790	31.8	0.495	950	1.608	34.709	27.790	31.8	0.495
1000	1.522	34.712	27.799	31.0	0.511	1000	1.551	34.712	27.797	31.2	0.512	1000	1.551	34.712	27.797	31.2	0.512
1053	1.455	34.712	27.804	30.5	0.529	1100	1.421	34.711	27.806	30.4	0.546	1100	1.421	34.711	27.806	30.4	0.546
						1200	1.396	34.720	27.815	29.5	0.580	1200	1.396	34.720	27.815	29.5	0.580
						1300	1.268	34.716	27.821	29.0	0.613	1300	1.268	34.716	27.821	29.0	0.613
						1400	1.134	34.711	27.826	28.5	0.645	1400	1.134	34.711	27.826	28.5	0.645
						1500	1.046	34.710	27.831	28.0	0.677	1500	1.046	34.710	27.831	28.0	0.677
						1600	0.962	34.707	27.833	27.8	0.708	1600	0.962	34.707	27.833	27.8	0.708
						1700	0.902	34.705	27.836	27.5	0.739	1700	0.902	34.705	27.836	27.5	0.739
						1800	0.806	34.700	27.838	27.3	0.770	1800	0.806	34.700	27.838	27.3	0.770
						1900	0.707	34.698	27.843	26.8	0.800	1900	0.707	34.698	27.843	26.8	0.800
						2000	0.632	34.695	27.845	26.6	0.829	2000	0.632	34.695	27.845	26.6	0.829
						2100	0.579	34.691	27.845	26.6	0.858	2100	0.579	34.691	27.845	26.6	0.858
						2200	0.526	34.688	27.846	26.6	0.886	2200	0.526	34.688	27.846	26.6	0.886
						2300	0.481	34.687	27.848	26.4	0.915	2300	0.481	34.687	27.848	26.4	0.915
						2400	0.429	34.684	27.848	26.3	0.943	2400	0.429	34.684	27.848	26.3	0.943
						2500	0.380	34.681	27.849	26.3	0.970	2500	0.380	34.681	27.849	26.3	0.970
						2600	0.333	34.680	27.851	26.1	0.998	2600	0.333	34.680	27.851	26.1	0.998
						2700	0.291	34.678	27.851	26.0	1.025	2700	0.291	34.678	27.851	26.0	1.025
						2800	0.254	34.679	27.854	25.8	1.051	2800	0.254	34.679	27.854	25.8	1.051
						2900	0.206	34.676	27.854	25.7	1.077	2900	0.206	34.676	27.854	25.7	1.077
						3000	0.162	34.675	27.856	25.6	1.103	3000	0.162	34.675	27.856	25.6	1.103
						3100	0.132	34.672	27.855	25.7	1.128	3100	0.132	34.672	27.855	25.7	1.128
						3200	0.109	34.672	27.857	25.6	1.153	3200	0.109	34.672	27.857	25.6	1.153
						3300	0.068	34.672	27.859	25.4	1.178	3300	0.068	34.672	27.859	25.4	1.178
						3400	0.042	34.671	27.859	25.3	1.202	3400	0.042	34.671	27.859	25.3	1.202
						3500	0.016	34.670	27.860	25.2	1.226	3500	0.016	34.670	27.860	25.2	1.226
						3600	-0.013	34.673	27.864	24.9	1.249	3600	-0.013	34.673	27.864	24.9	1.249
						3700	-0.056	34.671	27.864	24.8	1.272	3700	-0.056	34.671	27.864	24.8	1.272
						3800	-0.081	34.668	27.863	24.9	1.295	3800	-0.081	34.668	27.863	24.9	1.295
						3900	-0.114	34.666	27.863	24.9	1.317	3900	-0.114	34.666	27.863	24.9	1.317
						4000	-0.177	34.665	27.866	24.7	1.338	4000	-0.177	34.665	27.866	24.7	1.338
						4043	-0.181	34.665	27.866	24.7	1.347	4043	-0.181	34.665	27.866	24.7	1.347

RV MELVILLE										INDOMED L&G XIII									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES	
49 26.3S		38 08.4W		11/24/78		2326 0245		GMT		4643M		27U		25KT		1			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S104	DT	DD				
1	2.61	33.856	8.38	1.16	2.	0.27	17.4	103.9	0	2.61	33.856	8.38	27.030	103.9	0.000				
26	2.59	33.854	8.65	1.17	2.	0.27	17.5	103.9	10	2.60	33.857	8.53	27.030	103.9	0.010				
52	1.06	33.830	8.42	1.49	8.	0.25	21.6	95.0	20	2.59	33.856	8.63	27.030	103.9	0.021				
78	0.76	33.840	8.30	1.65	11.	0.24	22.7	92.4	30	2.56	33.849	8.63	27.043	102.6	0.031				
105	0.91	33.881	8.12	1.56	6.	0.24	21.6	90.2	50	1.18	33.832	8.44	27.117	95.7	0.051				
135	0.59	33.877	8.12	1.65	12.	0.24	22.9	88.7	75	0.79	33.842	8.31	27.150	92.6	0.075				
155	0.50	33.977	7.46	2.08	30.	0.19	28.0	80.6	100	0.88	33.875	8.15	27.171	90.6	0.097				
175	0.57	34.044	7.02	2.19	40.	0.12	29.8	75.9	125	0.71	33.881	8.12	27.185	89.2	0.120				
207	0.90	34.170	6.12	2.32	50.	0.09	32.3	68.2	150	0.51	33.951	7.64	27.254	82.7	0.141				
247	1.40	34.311	5.23	2.44	60.	0.06	34.1	60.6	200	0.81	34.143	6.32	27.390	69.8	0.180				
297	1.74	34.411	4.63	2.47	68.	0.04	35.1	55.3	250	1.43	34.320	5.18	27.491	60.2	0.212				
358	1.83	34.472	4.40	2.50	74.	0.04	35.1	51.4	300	1.74	34.415	4.61	27.545	55.1	0.242				
439	1.90	34.536	4.22	2.51	79.	0.02	35.0	47.0	400	1.87	34.508	4.29	27.609	49.0	0.295				
519	1.96	34.589	4.13	2.47	84.	0.02	34.4	43.4	500	1.95	34.579	4.14	27.660	44.2	0.344				
610	1.94	34.627	4.10	2.43	89.	0.02	34.2	40.4	600	1.94	34.625	4.10	27.697	40.7	0.388				
711	1.91	34.661	4.16	2.36	91.	0.02	34.1	37.6	700	1.91	34.659	4.15	27.726	37.9	0.431				
811	1.89	34.684	4.16	2.37	95.	0.01	33.2	35.7	800	1.89	34.682	4.16	27.747	35.9	0.471				
905A	1.86	34.702	4.16	2.35	93.	0.00	32.9	34.1	1000	1.80	34.711	4.21	27.778	33.0	0.548				
1063	1.74	34.713	4.25	2.33	100.	0.01	32.6	32.4	1200	1.60	34.714	4.35	27.795	31.4	0.621				
1211A	1.59	34.714	4.36	2.33	99.	0.00	32.5	31.3	1500	1.80	34.784	4.79	27.837	27.4	0.725				
1364A	1.82	34.767	4.71	2.11	85.	0.00	29.8	28.9	1750	1.35	34.738	4.71	27.831	27.9	0.809				
1517A	1.80	34.787	4.80	2.00	82.	0.01	28.8	27.3	2000	1.04	34.722	4.66	27.841	27.0	0.890				
1670A	1.49	34.747	4.75	2.18	97.	0.00	30.9	28.1	2250	0.84	34.708	4.79	27.843	26.9	0.967				
1824A	1.24	34.732	4.68	2.24	106.	0.00	31.6	27.6	2500	0.65	34.703	4.83	27.850	26.2	1.042				
1979A	1.06	34.724	4.66	2.28	111.	0.00	32.1	27.0	2750	0.44	34.702	5.01	27.861	25.2	1.112				
2132A	0.927	34.711	4.72	2.29	116.	0.00	32.3	27.2	3000	0.31	34.685	5.03	27.854	25.8	1.180				
2284A	0.810	34.707	4.81	2.30	118.	0.01	32.5	26.8	3250	0.20	34.678	5.13	27.856	25.6	1.245				
2439A	0.687	34.703	4.83	2.33	119.	0.00	32.5	26.3	3500	0.14	34.675	5.11	27.857	25.5	1.309				
2592A	0.592	34.701	4.82	2.33	119.	0.03	32.8	26.0	3750	0.09	34.672	5.21	27.856	25.6	1.371				
2746A	0.447	34.701	5.01	2.35	123.	0.01	32.9	25.1	4000	0.05	34.669	5.26	27.856	25.6	1.432				
2898A	0.362	34.687	4.99	2.32	126.	0.01	33.0	25.7	4250	-0.01	34.665	5.28	27.857	25.5	1.492				
3051A	0.279	34.680	5.05	2.33	128.	0.01	33.0	25.8	4500	-0.12	34.659	5.45	27.857	25.5	1.548				
3204A	0.218	34.678	5.11	2.34	128.	0.01	33.0	25.7											
3356A	0.175	34.676	5.15	2.35	128.	0.00	33.0	25.6											
3507A	0.135	34.674	5.11	2.35	129.	0.01	33.0	25.5											
3661A	0.111	34.672	5.21	2.35	130.	0.01	33.1	25.6											
3811A	0.080	34.670	5.21	2.34	131.	0.01	33.1	25.6											
3963A	0.052	34.668	5.26	2.35	130.	0.00	33.0	25.6											
4113A	0.029	34.667	5.26	2.35	130.	0.00	32.9	25.5											
4264A	-0.016	34.664	5.29	2.32	130.	0.00	32.9	25.5											
4412A	-0.075	34.660	5.40	2.32	130.	0.00	32.8	25.6											
4602A	-0.179	34.656	5.48	2.29	130.	0.02	32.6	25.4											

RV MELVILLE										INDOMED L&G XIII									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
48 41.8S		33 02.6W		11/26/78		0047 0524		GMT	5542M	270	30KT	5							
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S104	DT	DD				
2	3.39	33.873	8.01	1.37	2.	0.25	18.6	109.3	0	3.39	33.873	8.01	26.973	109.3	0.000				
38	3.29	33.875	8.03	1.39	2.	0.25	19.9	108.2	10	3.37	33.875	8.01	26.976	109.0	0.011				
73	1.67	33.847	8.09	1.64	7.	0.27	21.7	97.6	20	3.34	33.875	8.02	26.979	108.8	0.022				
104	1.13	33.864	8.02	1.70	13.	0.27	23.6	92.8	30	3.31	33.876	8.03	26.982	108.5	0.033				
139	1.18	33.979	7.46	1.91	20.	0.18	26.5	84.4	50	2.76	33.862	8.06	27.020	104.8	0.054				
155	1.30	34.002	7.31	1.93	22.	0.10	27.4	83.4	75	1.61	33.848	8.09	27.100	97.3	0.079				
175	1.46	34.044	7.02	2.02	24.		28.6	81.3	100	1.16	33.860	8.03	27.141	93.4	0.103				
194	1.52	34.072	6.80	2.06	27.		29.4	79.5	125	1.16	33.939	7.70	27.204	87.4	0.126				
226	1.44	34.100	6.62	2.12	31.	0.06	30.2	76.9	150	1.26	33.996	7.36	27.244	83.6	0.147				
266	1.72	34.170	6.11	2.20	37.	0.05	31.6	73.5	200	1.50	34.078	6.76	27.293	79.0	0.188				
317	1.96	34.239	5.50	2.30	43.	0.04	32.9	70.0	250	1.59	34.142	6.33	27.337	74.8	0.227				
377	2.177	34.316	5.02	2.38	53.	0.04	34.1	65.7	300	1.89	34.218	5.69	27.376	71.1	0.264				
458	2.047	34.365	4.77	2.44	63.	0.04	34.6	61.0	400	2.18	34.332	4.93	27.447	64.4	0.333				
560	2.265	34.472	4.27	2.47	70.	0.03	35.0	54.6	500	2.13	34.412	4.55	27.512	58.2	0.396				
642A	2.23	34.494	4.17	2.41	71.	0.02	34.6	52.7	600	2.25	34.483	4.20	27.559	53.7	0.455				
737	2.199	34.574	4.08	2.45	81.	0.04	35.0	46.4	700	2.21	34.546	4.12	27.613	48.5	0.509				
769A	2.21	34.567	3.99	2.38	79.	0.01	34.7	47.0	800	2.21	34.571	3.99	27.632	46.8	0.561				
1017	2.075	34.652	4.08	2.38	88.	0.04	33.9	39.5	1000	2.09	34.644	4.07	27.701	40.3	0.657				
1166A	2.01	34.684	4.70	2.26	89.	0.02	32.9	36.6	1200	2.02	34.689	4.70	27.743	36.3	0.744				
1385A	2.19	34.753	4.71	2.09	79.	0.01	36.4	32.8	1500	2.21	34.778	4.77	27.798	31.1	0.865				
1584A	2.23	34.791	4.81	1.95	72.	0.01	28.4	30.2	1750	2.03	34.778	4.78	27.813	29.7	0.962				
1780A	1.98	34.773	4.78	2.03	81.	0.01	29.2	29.6	2000	1.63	34.747	4.67	27.819	29.1	1.055				
1977A	1.65	34.748	4.67	2.13	94.	0.01	30.6	29.1	2250	1.41	34.739	4.74	27.828	28.3	1.144				
2174A	1.48	34.742	4.71	2.14	98.	0.05	30.8	28.4	2500	1.17	34.741	4.76	27.847	26.5	1.230				
2370A	1.30	34.732	4.77	2.19	104.	0.01	31.2	28.0	2750	0.93	34.714	4.78	27.841	27.0	1.311				
2566A	1.102	34.742	4.75	2.22	111.	0.01	31.9	25.9	3000	0.74	34.701	4.88	27.842	26.9	1.390				
2762A	0.92	34.711	4.78	2.24	113.	0.02	32.2	27.1	3250	0.55	34.691	4.97	27.846	26.5	1.466				
2957A	0.773	34.702	4.87	2.23	116.	0.03	32.4	26.9	3500	0.39	34.685	5.06	27.851	26.1	1.537				
3151A	0.627	34.693	4.93	2.28	121.	0.01	32.4	26.8	3750	0.28	34.683	5.12	27.856	25.6	1.605				
3344A	0.476	34.688	5.00	2.30	123.	0.03	32.8	26.3	4000	0.21	34.686	5.13	27.862	25.1	1.670				
3635A	0.323	34.682	5.11	2.31	126.	0.02	32.9	25.9	4250	0.17	34.684	5.19	27.862	25.0	1.732				
3921A	0.224	34.685		2.32	128.	0.02	33.0	25.2	4500	0.16	34.672	5.29	27.853	25.9	1.795				
4207A	0.177	34.686	E	5.17	2.32	130.	0.02	33.0	24.8	4750	0.17	34.670	5.24	27.851	26.1	1.859			
4491A	0.157	34.671	E	5.29	2.32	130.	0.03	33.4	25.9	5000	0.18	34.668	5.24	27.849	26.3	1.924			
4772A	0.168	34.669		5.23	2.33	130.	0.03	33.1	26.1	5250	0.18	34.666	5.24	27.847	26.5	1.990			
5051A	0.180	34.667		5.25	2.33	131.	0.03	33.1	26.3										
5328A	0.185	34.664		5.23	2.29	130.	0.02	33.1	26.6										

25 S						INDOMED LEG XIII CTU						25 D					
LATITUDE		LONGITUDE	MO/DAY/YR	START TIME		LATITUDE		LONGITUDE	MO/DAY/YR	START TIME		LATITUDE		LONGITUDE	MO/DAY/YR	START TIME	
49 27.2S		38 39.0W	11/25/78	0202 GMT		49 26. S		38 38. W	11/24/78	2144 GMT		49 26. S		38 38. W	11/24/78	2144 GMT	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	2.661	33.856	27.025	104.3	0.000	0	2.779	33.858	27.017	105.2	0.000	0	2.779	33.858	27.017	105.2	0.000
10	2.466	33.849	27.036	103.3	0.010	10	2.777	33.857	27.016	105.2	0.011	10	2.777	33.857	27.016	105.2	0.011
20	2.483	33.852	27.037	103.2	0.021	20	2.721	33.859	27.023	104.6	0.021	20	2.721	33.859	27.023	104.6	0.021
30	2.404	33.848	27.041	102.9	0.031	30	2.737	33.859	27.021	104.7	0.032	30	2.737	33.859	27.021	104.7	0.032
40	1.959	33.832	27.063	100.8	0.041	40	1.882	33.867	27.097	97.6	0.042	40	1.882	33.867	27.097	97.6	0.042
50	1.156	33.826	27.115	95.9	0.051	50	1.656	33.878	27.122	95.2	0.051	50	1.656	33.878	27.122	95.2	0.051
75	0.795	33.847	27.154	92.1	0.075	75	1.473	33.882	27.138	93.6	0.075	75	1.473	33.882	27.138	93.6	0.075
100	0.771	33.874	27.178	89.9	0.097	100	1.068	33.876	27.161	91.5	0.098	100	1.068	33.876	27.161	91.5	0.098
125	0.876	33.890	27.184	89.3	0.120	125	1.074	33.899	27.179	89.8	0.121	125	1.074	33.899	27.179	89.8	0.121
150	0.558	33.973	27.270	81.2	0.141	150	0.511	33.978	27.276	80.5	0.142	150	0.511	33.978	27.276	80.5	0.142
175	0.605	34.057	27.334	75.1	0.161	175	0.609	34.067	27.342	74.3	0.161	175	0.609	34.067	27.342	74.3	0.161
200	0.892	34.168	27.406	68.3	0.179	200	1.018	34.206	27.428	66.1	0.179	200	1.018	34.206	27.428	66.1	0.179
225	1.256	34.275	27.468	62.4	0.195	225	1.255	34.274	27.467	62.4	0.195	225	1.255	34.274	27.467	62.4	0.195
250	1.498	34.340	27.503	59.0	0.210	250	1.444	34.330	27.499	59.4	0.211	250	1.444	34.330	27.499	59.4	0.211
275	1.649	34.380	27.524	57.0	0.225	275	1.673	34.386	27.527	56.8	0.225	275	1.673	34.386	27.527	56.8	0.225
300	1.775	34.420	27.547	54.9	0.239	300	1.768	34.417	27.545	55.1	0.240	300	1.768	34.417	27.545	55.1	0.240
350	1.825	34.466	27.580	51.8	0.267	350	1.863	34.480	27.588	51.0	0.267	350	1.863	34.480	27.588	51.0	0.267
400	1.873	34.508	27.610	48.9	0.293	400	1.894	34.510	27.610	48.9	0.293	400	1.894	34.510	27.610	48.9	0.293
450	1.913	34.545	27.636	46.4	0.317	450	1.955	34.547	27.635	46.6	0.317	450	1.955	34.547	27.635	46.6	0.317
500	1.924	34.573	27.658	44.4	0.341	500	1.941	34.576	27.659	44.3	0.341	500	1.941	34.576	27.659	44.3	0.341
550	1.993	34.607	27.680	42.3	0.364	550	1.989	34.606	27.679	42.4	0.364	550	1.989	34.606	27.679	42.4	0.364
600	1.997	34.625	27.694	41.0	0.386	600	1.927	34.619	27.694	40.9	0.386	600	1.927	34.619	27.694	40.9	0.386
650	2.000	34.645	27.709	39.5	0.408	650	1.934	34.636	27.707	39.7	0.408	650	1.934	34.636	27.707	39.7	0.408
700	1.898	34.646	27.718	38.7	0.429	700	1.918	34.655	27.724	38.1	0.429	700	1.918	34.655	27.724	38.1	0.429
750	1.910	34.668	27.735	37.1	0.449	750	1.905	34.668	27.735	37.1	0.449	750	1.905	34.668	27.735	37.1	0.449
775	1.902	34.670	27.737	36.9	0.459	800	1.904	34.682	27.746	36.0	0.469	800	1.904	34.682	27.746	36.0	0.469
						850	1.860	34.689	27.755	35.1	0.489	850	1.860	34.689	27.755	35.1	0.489
						900	1.868	34.699	27.763	34.4	0.508	900	1.868	34.699	27.763	34.4	0.508
						950	1.892	34.702	27.766	34.1	0.527	950	1.892	34.702	27.766	34.1	0.527
						1000	1.804	34.707	27.774	33.4	0.546	1000	1.804	34.707	27.774	33.4	0.546
						1100	1.666	34.704	27.782	32.6	0.583	1100	1.666	34.704	27.782	32.6	0.583
						1200	1.601	34.712	27.794	31.5	0.619	1200	1.601	34.712	27.794	31.5	0.619
						1300	1.842	34.764	27.817	29.3	0.655	1300	1.842	34.764	27.817	29.3	0.655
						1400	1.983	34.797	27.832	27.9	0.690	1400	1.983	34.797	27.832	27.9	0.690
						1500	1.803	34.780	27.833	27.8	0.724	1500	1.803	34.780	27.833	27.8	0.724
						1600	1.678	34.767	27.832	27.9	0.758	1600	1.678	34.767	27.832	27.9	0.758
						1700	1.384	34.733	27.826	28.4	0.792	1700	1.384	34.733	27.826	28.4	0.792
						1800	1.288	34.729	27.830	28.1	0.826	1800	1.288	34.729	27.830	28.1	0.826
						1900	1.129	34.717	27.831	28.0	0.858	1900	1.129	34.717	27.831	28.0	0.858
						2000	1.044	34.714	27.834	27.7	0.891	2000	1.044	34.714	27.834	27.7	0.891
						2100	0.957	34.709	27.836	27.5	0.923	2100	0.957	34.709	27.836	27.5	0.923
						2200	0.879	34.707	27.839	27.2	0.954	2200	0.879	34.707	27.839	27.2	0.954
						2300	0.807	34.704	27.841	27.0	0.985	2300	0.807	34.704	27.841	27.0	0.985
						2400	0.722	34.701	27.844	26.7	1.015	2400	0.722	34.701	27.844	26.7	1.015
						2500	0.658	34.696	27.844	26.7	1.045	2500	0.658	34.696	27.844	26.7	1.045
						2600	0.598	34.695	27.847	26.4	1.075	2600	0.598	34.695	27.847	26.4	1.075
						2700	0.479	34.689	27.849	26.2	1.103	2700	0.479	34.689	27.849	26.2	1.103
						2800	0.421	34.686	27.850	26.1	1.132	2800	0.421	34.686	27.850	26.1	1.132
						2900	0.357	34.684	27.853	25.9	1.159	2900	0.357	34.684	27.853	25.9	1.159
						3000	0.290	34.679	27.852	26.0	1.186	3000	0.290	34.679	27.852	26.0	1.186
						3100	0.246	34.678	27.854	25.8	1.213	3100	0.246	34.678	27.854	25.8	1.213
						3200	0.211	34.677	27.855	25.7	1.239	3200	0.211	34.677	27.855	25.7	1.239
						3300	0.180	34.675	27.855	25.7	1.264	3300	0.180	34.675	27.855	25.7	1.264
						3400	0.158	34.672	27.854	25.8	1.290	3400	0.158	34.672	27.854	25.8	1.290
						3500	0.144	34.672	27.855	25.7	1.315	3500	0.144	34.672	27.855	25.7	1.315
						3600	0.122	34.673	27.857	25.5	1.341	3600	0.122	34.673	27.857	25.5	1.341
						3700	0.106	34.671	27.856	25.6	1.365	3700	0.106	34.671	27.856	25.6	1.365
						3800	0.080	34.670	27.856	25.6	1.390	3800	0.080	34.670	27.856	25.6	1.390
						3900	0.064	34.667	27.855	25.7	1.415	3900	0.064	34.667	27.855	25.7	1.415
						4000	0.052	34.665	27.854	25.8	1.439	4000	0.052	34.665	27.854	25.8	1.439
						4100	0.033	34.664	27.854	25.8	1.463	4100	0.033	34.664	27.854	25.8	1.463
						4200	0.004	34.669	27.860	25.3	1.487	4200	0.004	34.664			

RV MELVILLE

INDOMED L&G XIII

27

LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
48 25.55		32 03.8W		11/26/78		1424	1537	GMT	5237M	290	15KT	1				
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI4T	DT	DD	
1	4.98	33.962	7.51	1.43	7.	0.23	19.7	118.3	0	4.98	33.962	7.51	26.878	118.3	0.000	
21	4.94	33.958	7.58	1.43	7.	0.24	19.9	118.2	10	4.97	33.962	7.56	26.879	118.3	0.012	
47	4.83	33.961	7.47	1.43	6.	0.17	19.8	116.8	20	4.94	33.960	7.58	26.879	118.2	0.024	
72	4.79	33.960	7.33	1.45	7.	0.22	19.7	116.4	30	4.90	33.960	7.56	26.884	117.7	0.035	
93	4.02	33.964	7.34	1.59	10.	0.22	21.5	108.3	50	4.85	33.962	7.45	26.895	116.7	0.059	
113	3.87	33.966	7.33	1.62	11.	0.25	22.0	106.7	75	4.68	33.961	7.33	26.910	115.3	0.088	
133	3.43	33.963	7.40	1.70	13.	0.32	22.9	102.8	100	3.95	33.967	7.34	26.992	107.5	0.116	
164	2.05	33.919	7.63	1.83	18.	0.15	26.0	94.9	125	3.64	33.967	7.36	27.023	104.6	0.143	
205	1.97	33.988	7.25	1.90	20.	0.05	27.0	89.0	150	2.66	33.935	7.54	27.088	98.4	0.169	
245	1.53	34.043	6.87	2.05	27.	0.04	29.0	81.8	200	1.98	33.982	7.32	27.180	89.7	0.216	
276	1.52	34.113	6.42	2.19	34.	0.03	30.8	76.4	250	1.53	34.057	6.80	27.274	80.8	0.259	
306	1.76	34.171	6.00	2.22	37.	0.04	31.4	73.7	300	1.71	34.161	6.08	27.344	74.1	0.298	
357	1.92	34.228	5.50	2.33	44.	0.03	32.6	70.5	400	2.04	34.276	5.18	27.411	67.7	0.370	
429	2.10	34.307	5.01	2.41	52.	0.02	33.6	65.8	500	2.15	34.375	4.68	27.481	61.1	0.437	
510	2.15	34.383	4.64	2.46	61.	0.03	34.4	60.5	600	2.26	34.446	4.31	27.529	56.6	0.498	
612	2.27	34.453	4.28	2.48	65.	0.03	34.7	56.1	700	2.82	34.517	4.13	27.581	51.6	0.556	
714	2.32	34.526	4.11	2.46	73.	0.03	34.7	51.0	800	2.29	34.562	3.95	27.619	48.0	0.609	
830A	2.28	34.573	3.92	2.46	78.	0.01	34.7	47.1	1000	2.85	34.656	4.02	27.689	41.4	0.709	
916	2.29	34.619	4.06	2.40	81.	0.03	33.6	43.7	1200	2.05	34.668	4.00	27.725	38.2	0.799	
1035A	2.37	34.666	4.01	2.33	78.	0.03	33.0	40.8	1500	1.89	34.709	4.19	27.769	35.8	0.926	
1135A	2.11	34.658	4.00	2.38	80.	0.00	33.8	39.3	1750	1.84	34.742	4.47	27.799	31.0	1.024	
1237A	2.04	34.674	4.00	2.34	91.	0.03	33.7	37.6	2000	1.63	34.739	4.55	27.812	29.8	1.119	
1339A	2.00	34.691	4.15	2.35	91.	0.04	33.2	36.0	2250	1.46	34.742	4.67	27.827	28.3	1.210	
1491A	1.888	34.707	4.17	2.35	97.	0.03	33.0	34.0	2500	1.26	34.729	4.69	27.831	28.0	1.298	
1644A	1.892	34.736	4.48	2.21	92.	0.02	31.6	31.8	2750	1.04	34.717	4.77	27.837	27.4	1.383	
1803A	1.793	34.740	4.46	2.24	94.	0.00	31.6	30.8	3000	0.84	34.709	4.86	27.843	26.8	1.464	
1904A	1.678	34.733	4.48	2.25	99.	0.00	31.8	30.5	3250	0.62	34.696	4.95	27.846	26.6	1.542	
2154A	1.570	34.747	4.67	2.15	98.	0.01	31.2	28.7	3500	0.47	34.689	5.00	27.850	26.2	1.613	
2358A	1.342	34.735	4.68	2.21	105.	0.00	31.7	28.0	3750	0.34	34.683	5.09	27.852	26.0	1.685	
2561A	1.229	34.726	4.69	2.24	109.	0.00	32.0	28.0	4000	0.26	34.677	5.18	27.852	26.0	1.753	
2765A	1.023	34.716	4.78	2.30	114.	0.00	32.4	27.4	4250	0.20	34.675	5.22	27.853	25.9	1.814	
2967A	0.873	34.711	4.84	2.29	116.	0.00	32.4	26.8	4500	0.17	34.673	5.19	27.853	25.9	1.883	
3222A	0.641	34.696	4.95	2.31	121.	0.02	32.9	26.6	4750	0.16	34.670	5.21	27.852	26.0	1.947	
3474A	0.481	34.689	4.99	2.30	124.	0.03	33.0	26.2	5000	0.13	34.669	5.31	27.853	25.9	2.011	
3728A	0.351	34.683	5.08	2.39U	127.	0.02	33.2	26.0								
3981A	0.269	34.677	5.17	2.41U	128.	0.02	33.3	26.0								
4234A	0.200	34.674	5.22	2.39U	130.	0.02	33.3	25.9								
4486A	0.171	34.672	5.19	2.41U	130.	0.00	33.3	25.9								
4739A	0.139	34.669	5.20	2.41U	131.	0.00	33.3	26.0								
4990A	0.128	34.669	5.31	2.40U	131.	0.00	33.3	25.9								
5191A	0.112	34.661	5.26	2.41U	129.	0.02	33.1	26.4								

27 S						INDOMED LEG XIII CTD						27 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
48 25.9S	32 09.7W	11/26/78	1757 GMT			48 25.5S	32 13.6W	11/26/78	1252 GMT			48 25.5S	32 13.6W	11/26/78	1252 GMT		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	5.002	33.956	26.871	119.0	0.000	0	4.891	33.957	26.884	117.7	0.000	0	4.891	33.957	26.884	117.7	0.000
10	4.998	33.957	26.872	118.9	0.012	10	4.842	33.956	26.889	117.3	0.012	10	4.842	33.956	26.889	117.3	0.012
20	4.998	33.957	26.872	118.9	0.024	20	4.823	33.956	26.891	117.1	0.023	20	4.823	33.956	26.891	117.1	0.023
30	4.938	33.960	26.881	118.0	0.036	30	4.790	33.954	26.893	116.9	0.035	30	4.790	33.954	26.893	116.9	0.035
40	4.833	33.966	26.898	116.4	0.047	40	4.769	33.955	26.894	116.8	0.047	40	4.769	33.955	26.894	116.8	0.047
50	4.823	33.966	26.899	116.3	0.059	50	4.779	33.954	26.894	116.8	0.059	50	4.779	33.954	26.894	116.8	0.059
75	4.223	33.971	26.968	109.8	0.088	75	3.935	33.933	26.968	109.8	0.087	75	3.935	33.933	26.968	109.8	0.087
100	3.858	33.972	27.006	106.1	0.115	100	3.921	33.977	27.004	106.4	0.114	100	3.921	33.977	27.004	106.4	0.114
125	2.920	33.949	27.077	99.5	0.141	125	2.892	33.935	27.068	100.3	0.140	125	2.892	33.935	27.068	100.3	0.140
150	2.083	33.930	27.132	94.3	0.165	150	2.051	33.920	27.126	94.8	0.165	150	2.051	33.920	27.126	94.8	0.165
175	1.911	33.945	27.157	91.9	0.188	175	2.118	33.954	27.148	92.7	0.189	175	2.118	33.954	27.148	92.7	0.189
200	2.003	33.992	27.187	89.0	0.211	200	2.099	33.979	27.170	90.7	0.212	200	2.099	33.979	27.170	90.7	0.212
225	1.701	34.000	27.216	86.2	0.233	225	1.395	33.960	27.206	87.2	0.234	225	1.395	33.960	27.206	87.2	0.234
250	1.529	34.051	27.270	81.2	0.254	250	1.339	33.994	27.237	84.3	0.256	250	1.339	33.994	27.237	84.3	0.256
275	1.423	34.087	27.306	77.7	0.274	275	1.397	34.100	27.318	76.6	0.276	275	1.397	34.100	27.318	76.6	0.276
300	1.784	34.172	27.348	73.8	0.294	300	1.676	34.161	27.347	73.8	0.295	300	1.676	34.161	27.347	73.8	0.295
350	1.867	34.221	27.381	70.6	0.330	350	1.817	34.214	27.379	70.8	0.332	350	1.817	34.214	27.379	70.8	0.332
400	2.084	34.291	27.420	66.9	0.365	400	2.095	34.296	27.423	66.6	0.367	400	2.095	34.296	27.423	66.6	0.367
450	2.130	34.336	27.452	63.9	0.399	450	2.141	34.338	27.453	63.8	0.400	450	2.141	34.338	27.453	63.8	0.400
500	2.147	34.382	27.488	60.5	0.431	500	2.162	34.380	27.485	60.8	0.432	500	2.162	34.380	27.485	60.8	0.432
550	2.250	34.422	27.511	58.3	0.462	550	2.330	34.447	27.525	57.0	0.463	550	2.330	34.447	27.525	57.0	0.463
600	2.265	34.462	27.542	55.4	0.492	600	2.235	34.467	27.548	54.8	0.493	600	2.235	34.467	27.548	54.8	0.493
650	2.234	34.494	27.570	52.7	0.521	650	2.268	34.489	27.563	53.3	0.521	650	2.268	34.489	27.563	53.3	0.521
700	2.317	34.530	27.592	50.6	0.548	700	2.334	34.529	27.590	50.8	0.549	700	2.334	34.529	27.590	50.8	0.549
750	2.289	34.555	27.614	48.5	0.575	750	2.289	34.548	27.609	49.0	0.576	750	2.289	34.548	27.609	49.0	0.576
800	2.247	34.577	27.635	46.5	0.601	800	2.268	34.561	27.621	47.9	0.602	800	2.268	34.561	27.621	47.9	0.602
850	2.245	34.607	27.659	44.2	0.625	850	2.242	34.581	27.639	46.2	0.628	850	2.242	34.581	27.639	46.2	0.628
900	2.282	34.623	27.669	43.3	0.650	900	2.292	34.599	27.649	45.2	0.653	900	2.292	34.599	27.649	45.2	0.653
921	2.296	34.630	27.673	42.9	0.660	950	2.298	34.625	27.669	43.3	0.677	950	2.298	34.625	27.669	43.3	0.677
						1000	2.359	34.648	27.683	42.0	0.701	1000	2.359	34.648	27.683	42.0	0.701
						1100	2.160	34.657	27.706	39.8	0.748	1100	2.160	34.657	27.706	39.8	0.748
						1200	2.076	34.669	27.722	38.2	0.792	1200	2.076	34.669	27.722	38.2	0.792
						1300	2.003	34.686	27.742	36.4	0.836	1300	2.003	34.686	27.742	36.4	0.836
						1400	2.006	34.704	27.756	35.1	0.878	1400	2.006	34.704	27.756	35.1	0.878
						1500	1.907	34.707	27.766	34.1	0.919	1500	1.907	34.707	27.766	34.1	0.919
						1600	1.875	34.720	27.779	32.9	0.959	1600	1.875	34.720	27.779	32.9	0.959
						1700	1.904	34.743	27.795	31.4	0.998	1700	1.904	34.743	27.795	31.4	0.998
						1800	1.802	34.737	27.798	31.1	1.037	1800	1.802	34.737	27.798	31.1	1.037
						1900	1.769	34.747	27.809	30.1	1.075	1900	1.769	34.747	27.809	30.1	1.075
						2000	1.605	34.735	27.812	29.8	1.112	2000	1.605	34.735	27.812	29.8	1.112
						2100	1.605	34.748	27.822	28.8	1.149	2100	1.605	34.748	27.822	28.8	1.149
						2200	1.511	34.743	27.825	28.6	1.185	2200	1.511	34.743	27.825	28.6	1.185
						2300	1.401	34.737	27.828	28.3	1.221	2300	1.401	34.737	27.828	28.3	1.221
						2400	1.302	34.730	27.829	28.1	1.256	2400	1.302	34.730	27.829	28.1	1.256
						2500	1.260	34.730	27.832	27.8	1.291	2500	1.260	34.730	27.832	27.8	1.291
						2600	1.154	34.723	27.834	27.7	1.326	2600	1.154	34.723	27.834	27.7	1.326
						2700	1.055	34.720	27.838	27.3	1.359	2700	1.055	34.720	27.838	27.3	1.359
						2800	0.984	34.716	27.840	27.1	1.392	2800	0.984	34.716	27.840	27.1	1.392
						2900	0.896	34.711	27.841	27.0	1.425	2900	0.896	34.711	27.841	27.0	1.425
						3000	0.823	34.708	27.844	26.8	1.457	3000	0.823	34.708	27.844	26.8	1.457
						3100	0.736	34.702	27.844	26.7	1.488	3100	0.736	34.702	27.844	26.7	1.488
						3200	0.677	34.698	27.845	26.7	1.519	3200	0.677	34.698	27.845	26.7	1.519
						3300	0.590	34.695	27.848	26.4	1.549	3300	0.590	34.695	27.848	26.4	1.549
						3400	0.529	34.690	27.847	26.4	1.578	3400	0.529	34.690	27.847	26.4	1.578
						3500	0.475	34.690	27.851	26.1	1.607	3500	0.475	34.690	27.851	26.1	1.607
						3600	0.413	34.685	27.850	26.2	1.636	3600	0.413	34.685	27.850	26.2	1.636
						3700	0.360	34.684	27.852	26.0	1.664	3700	0.360	34.684	27.852	26.0	1.664
						3800	0.326	34.683	27.853	25.8	1.691	3800	0.326	34.683	27.853	25.8	1.691
						3900	0.288	34.681	27.854	25.8	1.718	3900	0.288	34.681	27.854	25.8	1.718
						4000	0.261	34.680	27.855	25.7	1.745	4000	0.261	34.680	27.855	25.7	1.745
						4100	0.219	34.678	27.855	25.7	1.771	4100	0.219	34.678	27.855	25.7	1.771
						4200	0.202	34.677	27.856	25.7	1.797	4200	0.202	34.677	27.856	25.7	1.797
						4300	0.186	34.676	27.856	25.6	1.822	4300	0.186	34.676	27.856	25.6	1.822
						4400	0.183	34.674	27.854	25.8	1.848	4400	0.183	34.674	27.854	25.8	1.848
						4500	0.172	34.673	27.854	25.8	1.874	4500	0.172	34.673	27.854	25.8	1.874
						4600	0.170	34.672	27.853	25.9	1.899	4600	0.170	34.672	27.853	25.9	1.899
						4700	0.163	34.670	27.852	26.0	1.925	4700	0.163	34.670	27.852	26.0	1.925
						4800	0.155	34.668	27.851	26.1	1.951	4800	0.155	34.668	27.851	26.1	1.951
						4900	0.141	34.669	27.852	26.0	1.976	4900	0.141	34.669	27.852	26.0	1.976
						5000	0.126	34.667	27.852	26.0	2.001	5000	0.126	34.667	27.852	26.0	2.001
						5100	0.102	34.665	27.851	26.1	2.026	5100	0.102	34.665	27.851	26.1	2.026
						5200	0.113	34.665	27.851	26.1	2.051	5200	0.113	34.665	27.851	26.1	2.051
						5218	0.116	34.664	27.850	26.2							

RV MELVILLE										INCOMED L&G XIII										28
LATITUDE 48 27.4S		LONGITUDE 30 05.2W		MO/DAY/YR 11/27/78		MESSENGER 0508 0925		TIME GMT	BOTTOM 5050M	WIND 320	SPEED 20KT	WEATHER 6	DOMINANT WAVES 49							
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	U2	S10T	UT	UD					
1	5.47	34.051	7.51	1.27	2.	0.19	17.8	117.1	0	5.47	34.051	7.51	26.891	117.1	0.000					
26	5.30	34.063	7.51	1.34	2.	0.19	18.2	114.3	10	5.41	34.050	7.51	26.896	116.6	0.012					
62	4.28	34.074	7.09	1.63	9.	0.18	22.4	102.6	20	5.34	34.056	7.51	26.909	115.3	0.023					
93	3.16	34.025	7.22	1.73	12.	0.18	24.3	95.8	30	5.22	34.067	7.46	26.933	113.1	0.035					
124	3.65	34.125	6.92	1.76	12.	0.10	25.0	92.6	50	4.69	34.075	7.22	27.000	106.8	0.057					
155	3.29	34.108	6.83	1.80	14.	0.07	25.6	90.7	75	3.73	34.047	7.14	27.078	99.3	0.083					
185	3.09	34.111	6.96	1.85	15.	0.03	26.3	88.7	100	3.24	34.047	7.16	27.125	94.9	0.107					
216	2.73	34.096	6.94	1.87	17.	0.03	26.6	86.8	125	3.64	34.126	6.92	27.149	92.6	0.131					
246	2.38	34.080	6.96	1.91	19.	0.03	27.2	85.2	150	3.37	34.115	6.84	27.167	90.9	0.154					
287	2.57	34.126	6.60	1.98	22.	0.02	28.3	83.2	200	2.93	34.106	6.95	27.201	87.7	0.199					
338	2.58	34.156	6.31	2.07	26.	0.02	29.4	81.0	250	2.39	34.085	6.93	27.230	85.0	0.243					
399	2.691	34.224	5.77	2.19	34.	0.02	31.1	76.8	300	2.57	34.134	6.52	27.254	82.7	0.286					
470	2.563	34.267	5.36	2.29	40.	0.02	32.2	72.5	400	2.69	34.226	5.76	27.317	76.7	0.367					
552	2.493	34.330	4.95	2.35	49.	0.02	33.5	67.2	500	2.52	34.290	5.20	27.382	70.5	0.443					
643	2.623	34.408	4.58	2.40	57.	0.01	34.1	62.3	600	2.56	34.374	4.75	27.446	64.5	0.514					
736	2.479	34.448	4.17	2.44	64.	0.04	34.3	58.1	700	2.54	34.434	4.31	27.496	59.7	0.580					
844	2.487	34.517	4.17	2.44	69.	0.02	34.4	53.0	800	2.48	34.489	4.17	27.545	55.0	0.641					
911A	2.54	34.560	4.14	2.32	71.	0.01	33.8	50.1	1000	2.33	34.593	4.15	27.624	47.6	0.754					
1050	2.517	34.609	4.15	2.35	73.	0.02	33.4	46.2	1200	2.54	34.682	4.26	27.694	41.0	0.856					
1102A	2.50	34.633	4.13	2.30	75.	0.01	32.9	44.3	1500	2.37	34.755	4.45	27.767	34.0	0.991					
1197A	2.54	34.68	4.26	2.22	73.	0.00	31.9	41.1	1750	2.34	34.777	4.69	27.787	32.2	1.096					
1293A	2.53	34.70	4.29	2.12	73.	0.01	31.1	39.5	2000	2.17	34.783	4.78	27.806	30.4	1.199					
1388A	2.39	34.713	4.33	2.19	77.	0.01	31.3	37.4	2250	1.88	34.779	4.77	27.826	28.4	1.298					
1530A	2.37	34.766	4.49	2.10	76.	0.01	30.4	33.2	2500	1.47	34.741	4.51	27.825	28.5	1.391					
1672A	2.37	34.770	4.61	2.03	74.	0.00	29.3	32.9	2750	1.25	34.727	4.73	27.830	28.1	1.481					
1814A	2.31	34.781	4.74	2.00	75.	0.02	29.0	31.6	3000	1.04	34.718	4.81	27.838	27.3	1.568					
1955A	2.21	34.783	4.77	2.00	77.	0.01	28.8	30.6	3250	0.81	34.707	4.88	27.843	26.8	1.650					
2144A	2.03	34.78	4.80	2.03	82.	0.00	29.2	29.5	3500	0.60	34.694	4.96	27.845	26.6	1.727					
2334A	1.75	34.775	4.72	2.10	94.	0.00	30.2	27.8	3750	0.40	34.684	5.09	27.849	26.3	1.800					
2520A	1.443	34.736	4.49	2.19	104.	0.01	31.4	28.6	4000	0.28	34.678	5.14	27.852	26.0	1.869					
2708A	1.282	34.728	4.71	2.21	110.	0.01	31.3	28.1	4250	0.20	34.674	5.18	27.853	25.9	1.935					
2896A	1.144	34.722	4.77	2.23	114.	0.00	31.5	27.7	4500	0.17	34.671	5.20	27.852	26.0	2.000					
3130A	0.909	34.713	4.86	2.24	119.	0.01	32.1	26.9	4750	0.16	34.670	5.26	27.851	26.1	2.065					
3365A	0.722	34.700	4.90	2.25	122.	0.02	32.4	26.8	5000	0.17	34.668	5.21	27.850	26.2	2.129					
3600A	0.511	34.688	5.01	2.32	126.	0.01	32.6	26.5												
3834A	0.352	34.681	5.12	2.33	128.	0.01	32.6	26.1												
4069A	0.251	34.676	5.14	2.33	130.	0.02	32.6	26.0												
4305A	0.190	34.673	5.19	2.32	131.	0.00	32.8	25.9												
4539A	0.173	34.670	5.20	2.32	131.	0.00	32.7	26.0												
4775A	0.163	34.669	5.26	2.32	131.	0.00	32.9	26.1												
4964A	0.168	34.668	5.22	2.32	130.	0.02	32.9	26.2												

RV MELVILLE					INCOMED L&G XIII										29		
LATITUDE 47 38.7S		LONGITUDE 25 01.1W		MO/DAY/YR 11/27/78		MESSENGER 1517 1850		TIME GMT	BOTTOM 4526M	WIND 310	SPEED 28KT	WEATHER 1	DOMINANT WAVES 310 10 10				
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	S10T	UT	DD		
1	4.36	33.977	7.360	1.51	6.	0.24	20.3	110.7	0	4.36	33.977	7.51	26.958	110.7	0.000		
32	4.34	33.979	7.52	1.53	6.	0.24	20.7	110.4	10	4.36	33.978	7.51	26.959	110.6	0.011		
67	4.29	33.985	7.50	1.52	6.	0.26	20.8	109.4	20	4.35	33.979	7.52	26.960	110.6	0.022		
101	3.14	34.043	7.13	1.81	13.	0.12	25.0	94.2	30	4.34	33.980	7.52	26.962	110.4	0.033		
131	3.03	34.081	7.07	1.81	15.	0.05	25.6	90.4	50	4.31	33.983	7.51	26.967	109.9	0.055		
161	2.97	34.098	7.00	1.87	15.	0.05	26.1	88.6	75	4.02	33.997	7.41	27.009	105.9	0.082		
191	2.89	34.114	6.71	1.98	19.	0.04	27.2	86.7	100	3.17	34.042	7.14	27.127	94.7	0.108		
222	2.69	34.125	6.57	2.00	21.	0.04	27.9	84.2	125	3.05	34.080	7.07	27.169	90.7	0.131		
252	2.49	34.136	6.36	2.05	23.	0.04	29.0	81.8	150	2.99	34.094	7.04	27.185	89.2	0.154		
281	2.45	34.163	6.10	2.13	29.	0.03	30.1	79.4	200	2.84	34.119	6.67	27.218	86.0	0.198		
312	2.31	34.169	6.00	2.16	30.	0.03	30.5	77.9	250	2.50	34.136	6.38	27.261	82.0	0.241		
351	2.00	34.162	6.04	2.18	33.	0.04	30.8	76.1	300	2.38	34.170	6.02	27.299	78.4	0.282		
391	2.23	34.218	5.58	2.27	38.	0.04	31.9	73.6	400	2.24	34.225	5.52	27.354	73.1	0.359		
441	2.28	34.257	5.29	2.32	43.	0.03	32.7	71.0	500	2.36	34.314	4.93	27.416	67.3	0.431		
500	2.36	34.314	4.93	2.36	50.	0.04	33.6	67.3	600	2.44	34.395	4.52	27.473	61.9	0.499		
574	2.42	34.372	4.62	2.43	56.	0.03	34.3	63.4	700	2.48	34.474	4.20	27.533	56.2	0.561		
648	2.47	34.435	4.36	2.45	62.	0.03	34.7	59.0	800	2.46	34.526	4.13	27.576	52.1	0.620		
717A	2.48	34.485	4.16	2.50	69.	0.00	34.9	55.3	1000	2.38	34.613	4.04	27.632	44.9	0.727		
796	2.46	34.523	4.13	2.46	70.	0.04	34.7	52.3	1200	2.50	34.679	4.14	27.712	39.3	0.823		
891A	2.43	34.568	4.08	2.46	75.	0.00	34.3	48.6	1500	2.23	34.742	4.44	27.768	34.0	0.954		
1063A	2.35	34.635	4.02	2.30	79.	0.02	33.6	42.9	1750	2.07	34.761	4.39	27.797	31.2	1.056		
1239A	2.285	34.689	4.19	2.28	80.	0.00	32.6	38.3	2000	1.77	34.753	4.64	27.814	29.6	1.152		
1414A	2.264	34.727	4.37	2.19	80.	0.00	31.1	35.3	2250	1.45	34.737	4.63	27.824	28.7	1.244		
1587A	2.185	34.752	4.50	2.16	81.	0.00	30.4	32.8	2500	1.38	34.722	4.66	27.831	28.0	1.332		
1762A	2.056	34.762	4.59	2.11	83.	0.00	30.1	31.1	2750	0.91	34.707	4.76	27.837	27.4	1.415		
1935A	1.834	34.755	4.64	2.16	90.	0.00	30.4	29.9	3000	0.70	34.698	4.86	27.843	26.9	1.494		
2109A	1.651	34.749	4.64	2.13	96.	0.01	30.7	29.1	3250	0.49	34.689	5.00	27.848	26.4	1.569		
2281A	1.404	34.733	4.63	2.25	104.	0.01	31.4	28.6	3500	0.34	34.680	5.18	27.849	26.2	1.639		
2456A	1.217	34.724	4.65	2.27	110.	0.01	31.9	28.0	3750	0.23	34.677	5.12	27.853	25.8	1.706		
2630A	1.058	34.714	4.70	2.28	114.	0.01	32.0	27.8	4000	0.15	34.671	5.15	27.853	25.9	1.771		
2803A	0.853	34.704	4.79	2.32	118.	0.01	32.6	27.3	4250	0.11	34.670	5.21	27.854	25.8	1.834		
2976A	0.721	34.698	4.85	2.31	121.	0.01	32.7	26.9									
3150A	0.555	34.692	4.90	2.31	123.	0.01	32.9	26.4									
3322A	0.450																
3495A	0.340	34.679	5.18	2.34	127.	0.01	32.9	26.2									
3669A	0.261	34.676	5.09	2.34	129.	0.01	33.0	26.0									
3842A	0.193	34.676	5.16	2.36	130.	0.02	33.0	25.7									
4015A	0.145	34.670	5.15	2.35	130.	0.00	32.9	25.9									
4187A	0.112	34.670	5.21	2.36	132.	0.00	32.9	25.7									
4359A	0.108	34.667	5.20	2.33	129.	0.01	32.9	25.9									

LATITUDE		28 LONGITUDE		NO/DAY/YR		START TIME		INCOMED LEG XIII CTU	
48 28.38		30 05.34		11/27/78		0835 GMT			
Z	T	S		SIGMA T	DT	DU			
0	5.430	34.040		26.887	117.5	0.000			
10	5.437	34.059		26.901	116.1	0.012			
20	5.421	34.061		26.905	115.8	0.023			
30	5.267	34.056		26.919	114.4	0.035			
40	5.180	34.053		26.927	113.7	0.046			
50	4.386	34.020		26.990	107.7	0.057			
75	3.894	34.088		27.095	97.8	0.083			
100	3.388	34.075		27.134	94.0	0.107			
125	3.644	34.126		27.150	92.5	0.131			
150	3.476	34.133		27.172	90.4	0.154			
175	2.909	34.088		27.189	88.9	0.177			
200	2.906	34.108		27.205	87.3	0.199			
225	2.860	34.116		27.215	86.3	0.221			
250	3.066	34.194		27.227	85.2	0.243			
275	3.022	34.169		27.243	83.7	0.264			
300	2.945	34.174		27.254	82.7	0.286			
350	2.654	34.180		27.284	79.8	0.327			
400	2.647	34.217		27.314	76.9	0.368			
450	2.627	34.250		27.342	74.3	0.407			
500	2.528	34.274		27.370	71.7	0.444			
550	2.549	34.321		27.406	68.3	0.481			
600	2.529	34.364		27.442	64.9	0.516			
650	2.630	34.416		27.475	61.6	0.549			
700	2.548	34.431		27.494	60.0	0.581			
750	2.498	34.461		27.522	57.3	0.613			
800	2.502	34.502		27.554	54.2	0.643			
850	2.455	34.527		27.577	52.0	0.672			
900	2.494	34.556		27.598	50.1	0.700			
950	2.604	34.588		27.614	48.5	0.727			
1000	2.545	34.593		27.623	47.7	0.754			
1050	2.520	34.610		27.639	46.2	0.780			

RV MELVILLE						INDOMED L&G XIII										30					
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME		BOTTOM		WIND		SPEED		WEATHER		DOMINANT WAVES			
47 11.8S		22 06.0W		11/29/78		0921 1255		GMT		4440M		300		20KT		1		310 10 7			
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S107	DT	DD						
0	5.68	34.026	7.26	1.35	6.	0.19	19.2	121.4	0	5.68	34.026	7.26	26.846	121.4	0.000						
20	5.65	34.050	7.35	1.39	6.	0.20	19.3	119.2	10	5.66	34.042	7.31	26.859	120.1	0.012						
51	5.61	34.048		1.41	6.	0.19	19.4	118.9	20	5.65	34.050	7.35	26.868	119.2	0.024						
71	5.60	34.048	7.22	1.38	6.	0.20	19.4	118.8	30	5.64	34.050	7.32	26.869	119.1	0.036						
102	5.01	34.121	6.74	1.56	8.	0.17	21.5	106.7	50	5.61	34.049	7.27	26.871	118.9	0.060						
132	4.28	34.163	6.76	1.75	11.	0.03	24.9	95.9	75	5.55	34.057	7.15	26.885	117.6	0.090						
166	4.09	34.163	6.68	1.80	12.	0.02	25.6	94.0	100	5.06	34.116	6.77	26.990	107.7	0.118						
204	3.94	34.165	6.60	1.83	13.	0.01	26.1	92.4	125	4.43	34.157	6.76	27.092	98.0	0.144						
243	3.66	34.154	6.75	1.84	14.	0.01	26.2	90.6	150	4.19	34.164	6.73	27.124	95.0	0.169						
293	3.46	34.159	6.52	1.92	17.	0.01	27.3	88.3	200	3.96	34.166	6.60	27.149	92.6	0.216						
353	3.13	34.153	6.50	1.95	20.	0.00	28.0	85.9	250	3.63	34.155	6.73	27.174	90.2	0.263						
413	2.906	34.166	6.30	2.07	24.	0.01	29.1	82.9	300	3.42	34.159	6.52	27.197	88.1	0.309						
483	2.643	34.179	6.06	2.14	29.	0.01	30.2	79.8	400	2.95	34.164	6.35	27.244	83.6	0.397						
553	2.541	34.214	5.76	2.23	35.	0.00	31.4	76.3	500	2.60	34.187	6.00	27.293	79.0	0.481						
632	2.590	34.280	5.26	2.34	43.	0.00	32.8	71.7	600	2.56	34.253	5.47	27.350	73.6	0.560						
712	2.608	34.344	4.88	2.35	50.	0.00	33.7	67.8	700	2.61	34.327	4.93	27.405	68.4	0.635						
801	2.620	34.400	4.54	2.43	57.	0.00	34.3	62.9	800	2.62	34.400	4.54	27.462	62.9	0.704						
885A	2.60	34.461	4.33	2.39	63.	0.00	34.7	58.1	1000	2.54	34.506	4.14	27.553	54.3	0.832						
1003	2.539	34.506	4.14	2.44	68.	0.01	34.8	54.2	1200	2.46	34.611	4.10	27.643	45.7	0.945						
1085A	2.50	34.558	4.08	2.38	72.	0.00	34.3	50.0	1500	2.45	34.710	4.33	27.725	38.0	1.093						
1233A	2.46	34.623	4.11	2.33	75.	0.00	33.7	44.7	1750	2.41	34.768	4.57	27.774	33.3	1.205						
1383A	2.50	34.689	4.21E	2.15	74.	0.00	32.1	40.1	2000	2.33	34.794	4.85	27.801	30.8	1.311						
1532A	2.43	34.715	4.36E	2.18	75.	0.00	31.5	37.5	2250	2.05	34.785	4.81	27.817	29.2	1.413						
1681A	2.44	34.755	4.51	2.09	73.	0.00	30.1	34.6	2500	1.70	34.759	4.79	27.824	28.6	1.511						
1830A	2.38	34.782	4.65	2.02	72.	0.00	29.4	32.1	2750	1.34	34.731	4.64	27.827	28.3	1.604						
1978A	2.35	34.794	4.85	1.97	69.	0.00	28.6	30.9	3000	1.09	34.717	4.79	27.833	27.8	1.692						
2127A	2.17	34.788	4.80	1.99	75.	0.00	28.8	30.0	3250	0.81	34.704	4.84	27.840	27.1	1.776						
2274A	2.02	34.784	4.82	2.00	80.	0.00	29.2	29.1	3500	0.62	34.693	4.97	27.844	26.7	1.854						
2424A	1.80	34.769	4.85	2.07	87.	0.00	29.9	28.6	3750	0.42	34.685	5.05	27.849	26.3	1.928						
2574A	1.602	34.750	4.71	2.14	95.	0.00	30.9	28.7	4000	0.24	34.677	5.23	27.854	25.8	1.996						
2722A	1.374	34.733	4.63	2.20	104.	0.01	31.5	28.4													
2870A	1.218	34.724	4.73	2.25	108.	0.00	32.0	28.0													
3019A	1.068	34.715	4.80	2.26	113.	0.00	32.1	27.8													
3167A	0.920	34.710	4.79	2.26	115.	0.01	32.3	27.2													
3315A	0.737	34.698	4.89	2.30	119.	0.00	32.6	27.0													
3462A	0.643	34.694	4.95	2.32	120.	0.00	32.6	26.8													
3611A	0.547	34.689	5.02	2.33	122.	0.00	32.7	26.6													
3757A	0.418	34.684	5.05	2.32	125.	0.00	32.7	26.3													
3905A	0.288	34.679	5.17	2.35	127.	0.00	33.0	26.0													
4052A	0.213	34.676	5.24	2.32U	128.	0.00	32.9	25.8													
4150A	0.173	34.670	5.20	2.33	129.	0.02	32.9	26.0													

RV MELVILLE										INDOMED L&G XIII									
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES						
46 20. S		20 00. W		11/30/78		0514 0917		GMT	3972M	230	28KT	2	260 10 10						
Z	T	S	O2	P04	S103	N02	N03	DT	Z	T	S	O2	S107	DT	DD				
2	6.27	34.140	7.11	1.30	5.	0.25	17.8	119.9	0	6.27	34.140	7.11	26.861	119.9	0.000				
27	6.28	34.139	7.15	1.32	5.	0.25	18.0	120.1	10	6.27	34.140	7.12	26.860	120.0	0.012				
53	6.29	34.140	7.08	1.33	5.	0.25	18.0	120.2	20	6.28	34.140	7.14	26.859	120.1	0.024				
82	6.20	34.137	7.09	1.34	6.	0.26	18.3	119.3	30	6.28	34.140	7.14	26.859	120.1	0.036				
113	5.74	34.116	7.10	1.42	7.	0.26	19.3	115.3	50	6.29	34.141	7.09	26.859	120.1	0.060				
145	5.21	34.128	7.06	1.51	8.	0.22	20.4	108.4	75	6.22	34.139	7.09	26.866	119.5	0.090				
173	4.38	34.126	7.12	1.62	9.	0.03	22.5	99.7	100	5.96	34.125	7.10	26.888	117.4	0.120				
203	4.23	34.117	7.19	1.64	10.	0.02	22.7	98.9	125	5.55	34.121	7.08	26.935	112.8	0.149				
237	4.10	34.128	6.96	1.73	11.	0.02	24.1	96.8	150	5.00	34.129	7.07	27.007	106.1	0.177				
272	3.92	34.155	6.59	1.84	14.	0.02	26.2	93.0	200	4.25	34.119	7.19	27.082	98.9	0.229				
312	3.61	34.157	6.53	1.89	16.	0.01	27.1	89.9	250	4.04	34.139	6.81	27.120	95.4	0.279				
351	3.48	34.160	6.43	1.94	18.	0.01	27.7	88.5	300	3.70	34.159	6.55	27.170	90.6	0.327				
400	3.28	34.160	6.32	1.96	20.	0.02	28.3	86.6	400	3.28	34.160	6.32	27.212	86.6	0.418				
459	2.97	34.163	6.20	2.06	24.	0.02	29.3	83.7	500	2.80	34.175	6.07	27.267	81.5	0.505				
528	2.71	34.184	5.96	2.15	30.	0.01	30.5	79.9	600	2.58	34.214	5.68	27.317	76.7	0.587				
605	2.58	34.216	5.66	2.22	35.	0.02	31.6	76.5	700	2.65	34.299	5.07	27.378	70.9	0.664				
692	2.65	34.291	5.11	2.33	44.	0.01	33.1	71.4	800	2.65	34.376	4.66	27.440	65.0	0.737				
765A	2.65								1000	2.58	34.481	4.18	27.530	56.5	0.869				
881	2.63	34.426	4.44	2.45	60.	0.01	35.2	61.0	1200	2.55	34.606	4.01	27.632	46.9	0.985				
964A	2.59	34.456	4.25	2.67U	62.	0.03	34.6	58.4	1500	2.52	34.688	4.23	27.700	40.3	1.139				
1063A	2.57								1750	2.43	34.743	4.45	27.752	35.4	1.257				
1162A	2.56	34.591	4.00	2.32	70.	0.00	33.9	48.0	2000	2.40	34.765	4.59	27.781	32.7	1.368				
1312A	2.536	34.635	4.09	2.33	72.	0.00	32.9	44.4	2250	2.14	34.778	4.72	27.805	30.4	1.474				
1462A	2.528	34.678	4.20	2.27	72.	0.00	32.1	41.1	2500	1.93	34.778	4.75	27.822	28.8	1.575				
1609A	2.475	34.712	4.31	2.21	73.	0.00	31.4	38.1	2750	1.53	34.745	4.69	27.825	28.6	1.673				
1759A	2.426	34.745	4.46	2.14	73.	0.00	30.5	35.2	3000	1.22	34.727	4.72	27.832	27.8	1.764				
1908A	2.336	34.755	4.50	2.13	74.	0.00	30.0	33.8	3250	0.98	34.713	4.79	27.837	27.4	1.851				
2056A	2.275	34.771	4.64	2.06	74.	0.00	29.4	32.1	3500	0.73	34.698	4.88	27.842	27.0	1.933				
2205A	2.153	34.774	4.69	2.07	77.	0.00	29.3	30.9											
2355A	2.098	34.787	4.77	2.00	77.	0.00	28.8	29.5											
2503A	1.922	34.778	4.75	2.06	84.	0.01	29.1	28.8											
2650A	1.684	34.757	4.72	2.14	92.	0.01	30.1	28.7											
2798A	1.459	34.739	4.68	2.21	101.	0.00	31.1	28.5											
2945A	1.287	34.730	4.70	2.20	107.	0.01	31.3	28.0											
3091A	1.126	34.722	4.75	2.26	111.	0.01	31.7	27.6											
3239A	0.995	34.713	4.79	2.28	114.	0.01	32.0	27.4											
3385A	0.847	34.705	4.82	2.30	117.	0.01	32.2	27.1											
3529A	0.696	34.696	4.90	2.31	120.	0.02	32.2	26.9											

RV MELVILLE

INDOMED L66 XIII

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LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES		
46 13.8S		18 05.3W		11/30/78		1634 2047		GMT	3841M	280	20KT	2	280	7	6
Z	T	S	02	P04	S103	N02	N04	DT	Z	T	S	02	S10T	DT	DD
1	7.13	34.206	7.01	1.19	4.	0.22	15.8	125.9	0	7.13	34.206	7.01	26.797	125.9	0.000
32	7.14	34.206	7.00	1.19	4.	0.22	15.9	126.1	10	7.13	34.207	7.01	26.797	126.0	0.013
62	7.13	34.209	6.89	1.19	4.	0.21	15.9	125.7	20	7.14	34.207	7.00	26.797	126.0	0.025
93	6.87	34.211	6.90	1.24	4.	0.23	16.3	122.2	30	7.14	34.207	7.00	26.796	126.1	0.038
123	6.03	34.260	6.93	1.33	5.	0.09	18.1	108.0	50	7.13	34.209	6.93	26.798	125.9	0.063
148p	5.44	34.228	6.92	1.41	6.	0.03	19.6	103.5	75	7.07	34.210	6.89	26.809	124.9	0.095
181p	5.01	34.195	6.92	1.52	7.	0.01	21.3	101.2	100	6.70	34.225	6.91	26.871	119.0	0.126
213p	4.64	34.201	6.63	1.65	10.	0.01	23.2	96.8	125	5.98	34.259	6.93	26.992	107.5	0.154
245p	4.32	34.188	6.47	1.75	11.	0.01	24.8	94.4	150	5.41	34.226	6.92	27.036	103.3	0.181
285p	3.904	34.168	6.50	1.83	13.	0.01	26.1	91.8	200	4.78	34.198	6.76	27.086	98.5	0.233
325p	3.665	34.161	6.58	1.85	14.	0.01	26.6	90.1	250	4.26	34.186	6.47	27.133	94.1	0.282
365p	3.424	34.157	6.47	1.90	16.	0.01	27.2	88.2	300	3.80	34.165	6.54	27.165	91.1	0.329
425p	3.221	34.155	6.38	1.94	19.	0.01	27.8	86.5	400	3.30	34.156	6.42	27.206	87.2	0.421
486p	2.972	34.165	6.17	2.02	23.	0.00	29.1	83.6	500	2.92	34.169	6.12	27.251	82.9	0.509
546p	2.781	34.182	5.96	2.11	27.	0.01	30.1	80.7	600	2.70	34.203	5.79	27.298	78.5	0.593
606p	2.700	34.205	5.77	2.15	31.	0.00	30.8	78.3	700	2.66	34.261	5.35	27.348	73.7	0.673
666p	2.656	34.240	5.50	2.23	36.	0.00	31.9	75.3	800	2.66	34.322	4.91	27.396	69.1	0.749
825p	2.657	34.337	4.81	2.35	49.	0.01	33.8	67.9	1000	2.63	34.460	4.20	27.509	58.5	0.887
937A	2.67	34.422	4.39	2.35	58.	0.00	34.5	61.6	1200	2.58	34.561	4.05	27.595	50.4	1.009
1109A	2.57	34.516	4.00	2.37	69.	0.00	34.6	53.7	1500	2.52	34.675	4.27	27.689	41.4	1.170
1232A	2.58	34.575	4.07	2.29	71.	0.00	33.8	49.3	1750	2.68	34.767	4.66	27.750	35.7	1.291
1356A	2.55	34.625	4.18	2.29	73.	0.00	33.2	45.3	2000	2.46	34.782	4.76	27.780	32.7	1.404
1479A	2.50	34.664	4.23	2.25	75.	0.00	32.7	41.9	2250	2.22	34.781	4.74	27.800	30.9	1.513
1603A	2.65	34.721	4.48	2.12	67.	0.00	30.9	38.9	2500	1.94	34.772	4.79	27.816	29.4	1.616
1726A	2.68	34.760	4.64	2.01	65.	0.00	29.5	36.2	2750	1.65	34.754	4.76	27.824	28.7	1.715
1850A	2.63	34.783	4.73	1.97	65.	0.00	28.7	34.0	3000	1.27	34.722	4.74	27.825	28.6	1.809
1972A	2.48	34.779	4.74	1.97	70.	0.00	28.9	33.1	3250	1.03	34.712	4.83	27.833	27.8	1.898
2071A	2.42	34.790	4.79	1.96	71.	0.00	28.6	31.8	3500	0.74	34.698	4.92	27.840	27.1	1.982
2169A	2.311	34.782	4.76	1.98	75.	0.00	28.9	31.5	3750	0.57	34.689	5.05	27.843	26.8	2.059
2293A	2.177	34.781	4.74	1.97	78.	0.00	28.8	30.5							
2439A	2.004	34.774	4.77	2.02	83.	0.00	29.3	29.8							
2587A	1.846	34.769	4.80	2.04	88.	0.01	29.6	29.0							
2734A	1.676	34.757	4.76	2.07	94.	0.00	30.0	28.6							
2882A	1.451	34.732	4.75	2.18	105.	0.00	31.5	28.8							
3028A	1.242	34.720	4.74	2.22	110.	0.00	31.6	28.5							
3175A	1.089	34.714	4.81	2.24	114.	0.00	31.9	28.0							
3323A	0.960	34.708	4.84	2.24	118.	0.01	32.2	27.6							
3468A	0.774	34.699	4.90	2.26	120.	0.00	31.9	27.2							
3615A	0.646	34.692	4.98	2.28	122.	0.00	32.3	26.9							
3763A	0.566	34.688	5.06	2.25	123.	0.00	32.3	26.8							

RV MELVILLE

INDOMED L66 XIII

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	LATITUDE 45 58.4S	LONGITUDE 17 09.0W	MO/DAY/YR 12/ 1/78	MESSENGER 0511 1406	TIME GMT	BOTTOM 3507M	WIND 240	SPEED 20KT	WEATHER 1	DOMINANT WAVES 230 9 9					
Z	T	S	02	P04	S103	N02	N03	DT	Z	T	S	02	S10T	DT	DD
2	7.06	34.215	7.00	1.19	4.	0.21	16.5	124.3	0	7.06	34.215	7.00	26.814	124.3	0.000
26	7.04	34.215	7.01	1.18	4.	0.21	16.6	124.1	10	7.05	34.216	7.00	26.816	124.2	0.012
52	7.05	34.215	6.92	1.14	4.	0.19	16.6	124.2	20	7.04	34.216	7.01	26.817	124.1	0.025
81	7.02	34.222	6.87	1.14	4.	0.18	16.6	123.3	30	7.04	34.216	7.00	26.817	124.1	0.037
111	6.68	34.304	6.66	1.30	5.	0.10	18.0	112.8	50	7.05	34.216	6.93	26.816	124.2	0.062
141	5.87	34.252	6.88	1.36	6.	0.03	19.3	106.7	75	7.03	34.221	6.88	26.823	123.5	0.094
170	5.52	34.227	6.95	1.42	6.	0.01	20.2	104.5	100	6.85	34.278	6.72	26.892	117.0	0.124
200	5.05	34.202	6.83	1.51	8.	0.01	21.6	101.1	125	6.30	34.286	6.75	26.972	109.4	0.153
229	4.59	34.199	6.33	1.72	11.	0.01	25.6	96.4	150	5.74	34.244	6.90	27.009	105.9	0.180
259	4.25	34.182	6.37	1.77	12.	0.00	26.7	94.2	200	5.05	34.202	6.83	27.060	101.1	0.233
298	3.97	34.171	6.39	1.84	14.	0.01	27.3	92.2	250	4.34	34.189	6.36	27.127	94.7	0.283
338	3.78	34.164	6.41	1.88	14.	0.01	27.4	90.9	300	3.96	34.171	6.39	27.154	92.2	0.331
388	3.59	34.163	6.36	1.83	16.	0.02	27.8	89.2	400	3.54	34.164	6.36	27.189	88.8	0.424
447	3.36	34.165	6.33	1.96	19.	0.02	28.6	87.0	500	3.14	34.168	6.20	27.231	84.9	0.514
516	3.08	34.169	6.14	2.00	22.	0.01	29.6	84.2	600	2.90	34.201	5.79	27.278	80.3	0.600
595	2.92	34.199	5.80	2.12	29.	0.00	31.0	80.6	700	2.69	34.243	5.44	27.331	75.3	0.682
683	2.68	34.228	5.53	2.16	35.	0.00	32.1	76.4	800	2.70	34.309	4.96	27.383	70.5	0.759
777	2.71	34.303	5.02	2.30	44.	0.00	33.6	71.0	1000	2.64	34.433	4.38	27.487	60.6	0.901
875A	2.66	34.327	4.81	2.21U	48.	0.00	34.4	68.7	1200	2.56	34.528	4.14	27.570	52.8	1.027
975	2.64	34.416	4.44	2.38	58.	0.00	34.9	61.8	1500	2.51	34.645	4.19	27.667	43.5	1.195
1073A	2.626								1750	2.52	34.727	4.37	27.732	37.5	1.319
1172A	2.550	34.511	4.15	2.36	68.	0.00	35.4	53.9	2000	2.54	34.785	4.71	27.775	35.2	1.435
1321A	2.613	34.593	4.12	2.35	70.	0.00	34.7	48.2	2250	2.37	34.795	4.82	27.799	30.7	1.545
1472A	2.515	34.635	4.18	2.33	74.	0.00	34.1	44.3	2500	2.04	34.782	4.78	27.816	29.3	1.650
1617A	2.488	34.683	4.21	2.26	75.	0.00	33.2	40.4	2750	1.70	34.757	4.71	27.822	28.8	1.750
1764A	2.525	34.733	4.40	2.10	71.	0.01	31.4	36.9	3000	1.36	34.731	4.69	27.826	28.4	1.846
1917A	2.554	34.772	4.61	2.01	68.	0.00	30.1	34.2	3250	1.12	34.722	4.81	27.835	27.6	1.936
2066A	2.515	34.790	4.76	1.98	67.	0.00	29.5	32.5	3500	1.00	34.735	4.81	27.834	25.8	2.021
2166A	2.454	34.794	4.74	1.96	69.	0.02	29.0	31.7							
2235B	2.395	34.799	4.82	1.97	69.	0.00	29.0	30.9							
2336B	2.236	34.795	4.82	1.97	73.	0.00	29.4	29.9							
2438B	2.111	34.788	4.77	1.99	77.	0.00	29.6	29.5							
2540B	1.987	34.779	4.79	2.04	82.	0.00	30.2	29.3							
2693B	1.821	34.769	4.75	2.09	89.	0.00	30.8	28.8							
2845B	1.509	34.739	4.66	2.22	101.	0.00	32.4	28.8							
2998B	1.360	34.731	4.69	2.22	106.	0.00	32.6	28.4							
3151B	1.215	34.725	4.77	2.24	110.	0.00	32.8	27.9							
3303B	1.076	34.720	4.82	2.25	112.	0.00	33.0	27.4							
3456B	1.017	34.732	4.81	2.23	115.	0.02	33.2	26.1							

33		INDOMED LEG XIII C10			
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
45 58.5S	17 19.2W	12/01/78	1250 GMT		
Z	I	S	SIGMA I	DT	UD
0	7.118	34.211	26.803	125.4	0.000
10	7.105	34.215	26.808	124.9	0.013
20	7.107	34.215	26.808	125.0	0.025
30	7.090	34.215	26.810	124.6	0.038
40	7.079	34.214	26.811	124.7	0.050
50	7.067	34.214	26.812	124.5	0.063
75	6.975	34.212	26.824	123.5	0.094
100	6.719	34.262	26.898	116.4	0.124
125	6.380	34.342	26.998	106.9	0.153
150	6.050	34.302	27.017	105.1	0.179
175	5.657	34.271	27.042	102.8	0.206
200	5.390	34.264	27.069	100.2	0.232
225	4.669	34.198	27.100	97.3	0.257
250	4.380	34.190	27.125	94.9	0.282
275	4.142	34.177	27.140	93.5	0.306
300	3.937	34.170	27.155	92.0	0.330
350	3.685	34.162	27.174	90.2	0.377
400	3.464	34.161	27.195	88.2	0.423
450	3.331	34.165	27.211	86.7	0.468
500	3.096	34.168	27.235	84.4	0.515
550	2.964	34.179	27.256	82.5	0.556
600	2.920	34.204	27.280	80.2	0.598
650	2.842	34.230	27.308	77.6	0.640
700	2.732	34.245	27.329	75.5	0.680
750	2.729	34.281	27.358	72.8	0.719
800	2.711	34.314	27.386	70.1	0.757
850	2.695	34.341	27.409	68.0	0.794
900	2.678	34.376	27.438	65.2	0.830
950	2.676	34.405	27.462	63.0	0.865
1000	2.660	34.433	27.485	60.7	0.899
1100	2.593	34.483	27.531	56.4	0.963
1200	2.565	34.537	27.577	52.1	1.024
1300	2.608	34.577	27.605	49.4	1.082
1400	2.565	34.609	27.634	46.6	1.138
1500	2.519	34.640	27.663	43.9	1.192
1600	2.502	34.678	27.694	40.9	1.243
1700	2.528	34.717	27.723	38.2	1.292
1800	2.520	34.743	27.745	36.1	1.340
1900	2.556	34.772	27.765	34.2	1.386
2000	2.559	34.786	27.777	33.0	1.431
2100	2.472	34.794	27.789	31.9	1.475
2200	2.414	34.795	27.795	31.4	1.519
2300	2.333	34.799	27.805	30.4	1.562
2400	2.188	34.791	27.811	29.9	1.605
2500	2.032	34.781	27.816	29.4	1.646
2600	1.940	34.772	27.816	29.4	1.687
2700	1.814	34.765	27.820	29.0	1.728
2800	1.630	34.747	27.819	29.1	1.767
2900	1.471	34.737	27.823	28.7	1.806
3000	1.377	34.733	27.826	28.4	1.844
3100	1.274	34.728	27.830	28.1	1.880
3200	1.145	34.721	27.833	27.8	1.916
3300	1.075	34.720	27.837	27.4	1.951
3400	1.037	34.717	27.837	27.4	1.986
3464	1.022	34.717	27.838	27.3	2.008

HV MELVILLE

INDOMED LEG XIII

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	LATITUDE 45 34.4S	LONGITUDE 15 07.6W	MO/DAY/YR 12/ 1/78	MESSENGER 2356 0344	TIME GMT	BOTTOM 3553M	WIND 23U	SPEED 27KT	WEATHER 1	DOMINANT WAVES					
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI04	DT	DD
1	6.53	34.160	7.15	1.27	5.	0.21	17.5	121.6	0	6.53	34.160	7.15	26.843	121.6	0.000
21	6.51	34.161	7.11	1.28	5.	0.21	17.8	121.3	10	6.52	34.162	7.13	26.845	121.5	0.012
53	6.51	34.159	7.05	1.29	5.	0.21	17.8	121.5	20	6.51	34.162	7.11	26.846	121.3	0.024
78	6.30	34.167	7.02	1.31	5.	0.24	17.9	118.3	30	6.51	34.161	7.09	26.846	121.4	0.036
104	6.04	34.172	7.06	1.34	6.	0.23	18.4	114.7	50	6.51	34.160	7.06	26.845	121.4	0.061
139	5.29	34.140	7.14	1.44	7.	0.29	19.8	108.4	75	6.33	34.167	7.02	26.874	118.7	0.091
165	4.66	34.105	7.17	1.55	8.	0.29	21.7	104.2	100	6.09	34.173	7.05	26.910	115.3	0.121
206	4.26	34.091	7.12	1.62	9.	0.02	22.9	101.1	125	5.62	34.157	7.11	26.955	111.0	0.149
246	4.47	34.186	6.32	1.77	11.	0.02	25.5	96.1	150	5.01	34.125	7.16	27.003	106.5	0.177
287	4.01	34.173	6.34	1.86	14.	0.02	27.3	92.5	200	4.28	34.089	7.13	27.055	101.5	0.230
338	3.55	34.158	6.40	1.93	16.	0.01	27.9	89.2	250	4.44	34.188	6.32	27.116	95.7	0.280
384	3.321	34.155	6.39	1.97	18.	0.01	28.5	87.4	300	3.88	34.170	6.36	27.161	91.5	0.328
423	3.098	34.153	6.28	2.01	20.	0.01	29.0	85.6	400	3.23	34.154	6.35	27.212	86.6	0.420
485	2.864	34.156	6.17	2.04	24.	0.01	30.0	83.3	500	2.82	34.162	6.10	27.255	82.6	0.508
561	2.714	34.195	5.76	2.15	30.	0.02	31.4	79.2	600	2.68	34.222	5.58	27.314	76.9	0.590
637	2.675	34.247	5.42	2.28	37.	0.01	32.7	74.9	700	2.68	34.290	5.15	27.369	71.8	0.669
714	2.680	34.298	5.09	2.32	44.	0.01	33.6	71.1	800	2.65	34.360	4.82	27.428	66.1	0.742
815	2.645	34.368	4.76	2.42	53.	0.01	34.8	65.5	1000	2.59	34.466	4.35	27.517	57.7	0.876
844A	2.65	34.372	4.59	2.28U	52.	0.00	33.6	65.2	1200	2.54	34.574	4.10	27.607	49.1	0.996
941	2.626V	34.439 V	4.35V	2.43	61.	0.01	35.2		1500	2.53	34.686	4.24	27.698	40.6	1.154
942A	2.59	34.433	4.34	2.42	60.	0.01	34.6	60.1	1750	2.52	34.750	4.52	27.750	35.6	1.273
1039A	2.59	34.486	4.35	2.40	65.	0.01	34.2	56.1	2000	2.45	34.787	4.71	27.787	32.0	1.384
1137A	2.56	34.544	4.09	2.39	70.	0.01	34.2	51.5	2250	2.22	34.790	4.76	27.807	30.2	1.490
1283A	2.52	34.607	4.11	2.34	74.	0.00	33.5	46.4	2500	1.94	34.775	4.80	27.818	29.2	1.593
1430A	2.53	34.662	4.16	2.25	74.	0.00	32.4	42.3	2750	1.60	34.753	4.70	27.826	28.5	1.691
1577A	2.52	34.708	4.34	2.17	73.	0.00	31.5	38.8	3000	1.37	34.742	4.74	27.834	27.7	1.785
1724A	2.53	34.746	4.50	2.09	71.	0.00	30.2	36.0	3250	1.28	34.734	4.85	27.834	27.7	1.876
1870A	2.466	34.766	4.59	2.05	71.	0.00	29.7	34.0	3500	1.23	34.729	4.81	27.833	27.8	1.968
2018A	2.420	34.790	4.73	1.97	70.	0.00	28.7	31.8							
2165A	2.269	34.789	4.82	1.99	75.	0.00	29.0	30.7							
2313A	2.178	34.790	4.71	2.00	76.	0.00	28.9	29.9							
2459A	2.005	34.780	4.80	2.01	83.	0.00	29.5	29.3							
2608A	1.777	34.763	4.80	2.09	90.	0.00	30.0	28.9							
2758A		34.754	4.43U	2.10	96.	0.00	30.5								
2907A	1.449	34.745	4.65	2.13	101.	0.00	30.9	28.0							
3057A	1.355	34.740	4.81	2.17	103.	0.01	31.2	27.6							
3210A	1.290	34.733		2.18	105.	0.01	31.2	27.8							
3460A	1.257	34.735	4.88	2.19	107.	0.00	31.5	27.5							
3463A	1.239	34.730	4.82	2.18	107.	0.02	31.4	27.7							

34 S						INDOMED LEG XIII CTD						34 D							
LATITUDE 45 32.9S		LONGITUDE 15 56.3W		MO/DAY/YR 12/02/78		START TIME 0250 GMT						LATITUDE 45 34.9S		LONGITUDE 15 58.0W		MO/DAY/YR 12/01/78		START TIME 2230 GMT	
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD		
0	6.527	34.163	26.846	121.4	0.000	0	6.594	34.160	26.834	122.5	0.000	0	6.594	34.160	26.834	122.5	0.000		
10	6.533	34.158	26.841	121.8	0.012	10	6.562	34.161	26.839	122.0	0.012	10	6.562	34.161	26.839	122.0	0.012		
20	6.534	34.158	26.841	121.8	0.024	20	6.566	34.160	26.838	122.1	0.024	20	6.566	34.160	26.838	122.1	0.024		
30	6.534	34.158	26.841	121.8	0.037	30	6.495	34.161	26.848	121.1	0.037	30	6.495	34.161	26.848	121.1	0.037		
40	6.533	34.159	26.842	121.7	0.049	40	6.487	34.161	26.849	121.0	0.049	40	6.487	34.161	26.849	121.0	0.049		
50	6.509	34.159	26.845	121.5	0.061	50	6.471	34.162	26.852	120.7	0.061	50	6.471	34.162	26.852	120.7	0.061		
75	6.362	34.164	26.868	119.2	0.091	75	6.272	34.168	26.883	117.8	0.091	75	6.272	34.168	26.883	117.8	0.091		
100	6.069	34.170	26.911	115.2	0.121	100	5.819	34.177	26.948	111.7	0.120	100	5.819	34.177	26.948	111.7	0.120		
125	5.364	34.141	26.975	109.1	0.149	125	4.976	34.120	27.003	106.4	0.148	125	4.976	34.120	27.003	106.4	0.148		
150	4.605	34.097	27.027	104.2	0.176	150	4.645	34.117	27.038	103.1	0.174	150	4.645	34.117	27.038	103.1	0.174		
175	4.341	34.095	27.054	101.6	0.203	175	4.502	34.132	27.066	100.5	0.200	175	4.502	34.132	27.066	100.5	0.200		
200	4.257	34.101	27.068	100.3	0.228	200	4.605	34.177	27.090	98.2	0.225	200	4.605	34.177	27.090	98.2	0.225		
225	4.473	34.161	27.092	98.0	0.254	225	4.412	34.183	27.116	95.7	0.250	225	4.412	34.183	27.116	95.7	0.250		
250	4.429	34.193	27.122	95.2	0.278	250	4.298	34.189	27.133	94.1	0.274	250	4.298	34.189	27.133	94.1	0.274		
275	4.156	34.181	27.142	93.3	0.302	275	4.042	34.176	27.149	92.6	0.298	275	4.042	34.176	27.149	92.6	0.298		
300	3.872	34.169	27.161	91.4	0.326	300	3.803	34.165	27.165	91.1	0.322	300	3.803	34.165	27.165	91.1	0.322		
350	3.530	34.160	27.188	88.9	0.373	350	3.478	34.157	27.191	88.7	0.368	350	3.478	34.157	27.191	88.7	0.368		
400	3.236	34.156	27.213	86.6	0.418	400	3.257	34.156	27.211	86.7	0.413	400	3.257	34.156	27.211	86.7	0.413		
450	2.983	34.155	27.235	84.4	0.462	450	3.049	34.156	27.230	84.9	0.458	450	3.049	34.156	27.230	84.9	0.458		
500	2.824	34.162	27.255	82.6	0.505	500	2.834	34.162	27.254	82.6	0.501	500	2.834	34.162	27.254	82.6	0.501		
550	2.735	34.187	27.283	79.9	0.547	550	2.821	34.189	27.277	80.5	0.543	550	2.821	34.189	27.277	80.5	0.543		
600	2.703	34.219	27.311	77.2	0.588	600	2.707	34.221	27.312	77.1	0.585	600	2.707	34.221	27.312	77.1	0.585		
650	2.685	34.257	27.343	74.2	0.628	650	2.682	34.257	27.343	74.2	0.624	650	2.682	34.257	27.343	74.2	0.624		
700	2.682	34.299	27.377	71.0	0.666	700	2.675	34.291	27.371	71.6	0.663	700	2.675	34.291	27.371	71.6	0.663		
750	2.679	34.324	27.397	69.1	0.703	750	2.674	34.335	27.406	68.2	0.700	750	2.674	34.335	27.406	68.2	0.700		
800	2.661	34.362	27.429	66.1	0.739	800	2.664	34.360	27.427	66.3	0.736	800	2.664	34.360	27.427	66.3	0.736		
850	2.626	34.390	27.454	63.7	0.774	850	2.641	34.391	27.454	63.7	0.770	850	2.641	34.391	27.454	63.7	0.770		
900	2.609	34.416	27.476	61.6	0.808	900	2.612	34.419	27.478	61.4	0.804	900	2.612	34.419	27.478	61.4	0.804		
950	2.612	34.444	27.498	59.5	0.841	950	2.591	34.443	27.499	59.4	0.847	950	2.591	34.443	27.499	59.4	0.847		
						1000	2.606	34.476	27.524	57.0	0.869	1000	2.606	34.476	27.524	57.0	0.869		
						1100	2.587	34.518	27.559	53.7	0.930	1100	2.587	34.518	27.559	53.7	0.930		
						1200	2.587	34.577	27.607	49.2	0.989	1200	2.587	34.577	27.607	49.2	0.989		
						1300	2.551	34.608	27.636	46.4	1.044	1300	2.551	34.608	27.636	46.4	1.044		
						1400	2.540	34.646	27.666	43.6	1.097	1400	2.540	34.646	27.666	43.6	1.097		
						1500	2.531	34.675	27.689	41.4	1.148	1500	2.531	34.675	27.689	41.4	1.148		
						1600	2.511	34.700	27.711	39.3	1.197	1600	2.511	34.700	27.711	39.3	1.197		
						1700	2.541	34.729	27.732	37.4	1.245	1700	2.541	34.729	27.732	37.4	1.245		
						1800	2.517	34.755	27.755	35.2	1.292	1800	2.517	34.755	27.755	35.2	1.292		
						1900	2.473	34.770	27.770	33.7	1.337	1900	2.473	34.770	27.770	33.7	1.337		
						2000	2.435	34.782	27.783	32.5	1.381	2000	2.435	34.782	27.783	32.5	1.381		
						2100	2.332	34.781	27.791	31.8	1.424	2100	2.332	34.781	27.791	31.8	1.424		
						2200	2.257	34.785	27.800	30.9	1.467	2200	2.257	34.785	27.800	30.9	1.467		
						2300	2.160	34.785	27.808	30.1	1.509	2300	2.160	34.785	27.808	30.1	1.509		
						2400	2.043	34.779	27.813	29.7	1.550	2400	2.043	34.779	27.813	29.7	1.550		
						2500	1.922	34.770	27.815	29.4	1.591	2500	1.922	34.770	27.815	29.4	1.591		
						2600	1.790	34.761	27.818	29.2	1.631	2600	1.790	34.761	27.818	29.2	1.631		
						2700	1.662	34.756	27.824	28.6	1.670	2700	1.662	34.756	27.824	28.6	1.670		
						2800	1.546	34.750	27.828	28.3	1.708	2800	1.546	34.750	27.828	28.3	1.708		
						2900	1.446	34.744	27.830	28.0	1.746	2900	1.446	34.744	27.830	28.0	1.746		
						3000	1.383	34.738	27.830	28.1	1.783	3000	1.383	34.738	27.830	28.1	1.783		
						3100	1.332	34.736	27.832	27.9	1.820	3100	1.332	34.736	27.832	27.9	1.820		
						3200	1.293	34.734	27.833	27.8	1.856	3200	1.293	34.734	27.833	27.8	1.856		
						3300	1.279	34.733	27.833	27.8	1.893	3300	1.279	34.733	27.833	27.8	1.893		
						3400	1.248	34.731	27.834	27.7	1.930	3400	1.248	34.731	27.834	27.7	1.930		
						3500	1.237	34.729	27.833	27.6	1.966	3500	1.237	34.729	27.833	27.6	1.966		
						3523	1.235	34.730	27.834	27.7	1.977	3523	1.235	34.730	27.834	27.7	1.977		

RV MELVILLE

INDOONED LL6 XIII

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	LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES					
	45 28.9S	14 07.2W	12/ 2/78	0947 1156	GMT	2454M	210	30KT	1	210 9 10					
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	S10T	UT	DD
2	5.85	34.085	7.27	1.34	6.	0.22	19.0	119.0	0	5.85	34.085	7.27	26.871	119.0	0.000
22	5.85	34.084	7.30	1.35	6.	0.21	19.2	119.0	10	5.85	34.086	7.29	26.871	119.0	0.012
53	5.85	34.084	7.27	1.35	6.	0.21	19.2	119.0	20	5.85	34.085	7.30	26.870	119.0	0.024
77	5.76	34.104	7.18	1.36	6.	0.23	19.3	116.5	30	5.85	34.085	7.29	26.870	119.0	0.036
103	4.77	34.097	7.20	1.53	8.	0.34	21.4	105.9	50	5.85	34.085	7.27	26.870	119.0	0.060
137	4.19	34.085	7.14	1.63	10.	0.03	23.3	100.9	75	5.77	34.101	7.19	26.893	116.9	0.089
163	4.23	34.111	6.98	1.68	10.	0.00	24.1	99.3	100	4.90	34.099	7.20	26.995	107.2	0.118
203	4.05	34.127	6.82	1.76	12.	0.00	25.3	96.3	125	4.41	34.088	7.16	27.051	101.9	0.144
241	3.76	34.152	6.60	1.80	14.	0.00	27.3	91.7	150	4.21	34.100	7.06	27.071	100.0	0.170
281	3.46	34.152	6.52	1.91	17.	0.00	28.2	88.9	200	4.07	34.127	6.83	27.107	96.6	0.219
331	3.12	34.149	6.44	1.99	20.	0.00	29.2	86.1	250	3.69	34.154	6.57	27.167	90.9	0.267
375	2.89	34.157	6.22	2.04	24.	0.00	30.0	83.5	300	3.32	34.151	6.50	27.200	87.8	0.313
415	2.76	34.162	6.13	2.08	26.	0.05	30.3	82.0	400	2.80	34.161	6.16	27.255	82.5	0.400
463	2.64	34.176	6.01	2.15	29.	0.00	31.2	80.0	500	2.38	34.189	5.87	27.297	78.5	0.484
522	2.55	34.197	5.78	2.17	33.	0.00	32.0	77.7	600	2.32	34.243	5.44	27.345	74.0	0.563
589A	2.50	34.234	5.51	2.24	37.	0.00	31.9	74.5	700	2.59	34.342	4.81	27.418	67.1	0.637
647	2.61	34.284	5.13	2.31	43.	0.00	33.9	71.6	800	2.58	34.416	4.43	27.478	61.4	0.705
688A	2.59	34.330	4.87	2.37	49.	0.00	33.7	67.9	1000	2.54	34.517	4.15	27.563	53.4	0.830
787A	2.576	34.407	4.46	2.43	58.	0.00	34.2	62.0	1200	2.53	34.595	4.10	27.625	47.5	0.944
886A	2.569	34.463	4.27	2.43	64.	0.00	34.6	57.7	1500	2.45	34.705	4.28	27.720	38.6	1.096
985A	2.535	34.511	4.16	2.44	68.	0.00	34.4	53.8	1750	2.39	34.757	4.64	27.767	34.0	1.210
1086A	2.538	34.548	4.11	2.41	71.	0.00	34.4	51.0	2000	2.29	34.786	4.77	27.799	31.0	1.316
1185A	2.531	34.586	4.10	2.38	72.	0.00	34.1	48.1	2250	2.10	34.788	4.82	27.815	29.5	1.419
1309A	2.500	34.642	4.12	2.33	75.	0.00	33.2	43.6							
1433A	2.462	34.675	4.18	2.29	76.	0.00	32.5	40.8							
1557A	2.436	34.726	4.37	2.20	75.	0.00	31.3	36.7							
1683A	2.417	34.750	4.55E	2.12	74.	0.00	30.7	34.8							
1806A	2.365	34.763	4.70E	2.09	74.	0.02	30.5	33.4							
1930A	2.353	34.780	4.75	2.05	72.	0.00	29.4	32.0							
2053A	2.229	34.789 F	4.78	2.02	75.	0.00	29.1	30.3							
2177A	2.144	34.787	4.80	2.01	78.	0.02	29.1	29.8							
2300A	2.055	34.786	4.83	2.02	81.	0.00	30.0	29.2							
2422A	1.775	34.768	4.87	2.08	90.	0.00	30.0	28.5							

RV MELVILLE

INDOONED LL6 XIII

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	LATITUDE	LONGITUDE	MO/DAY/YR	MESSENGER	TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES					
	47 46.2S	12 07.3W	12/ 3/78	0957 1236	GMT	2879M	270	25KT	1	260 8 8					
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	S10T	UT	DD
1	4.11	33.884	7.69	1.45	5.	0.27	20.3	115.2	0	4.11	33.884	7.69	26.911	115.2	0.000
26	4.10	33.883	7.66	1.46	5.	0.27	20.7	115.2	10	4.11	33.885	7.68	26.911	115.2	0.012
52	4.10	33.882	7.63	1.46	5.	0.17	20.5	115.3	20	4.10	33.885	7.67	26.911	115.2	0.023
77	4.10	33.884	7.57	1.45	5.	0.27	20.7	115.1	30	4.10	33.884	7.66	26.911	115.2	0.035
103	3.85	33.891	7.51	1.54	8.	0.35	21.2	112.2	50	4.10	33.883	7.63	26.910	115.3	0.050
134	3.33	33.941	7.45	1.65	11.	0.41	23.4	103.6	75	4.10	33.885	7.58	26.912	115.1	0.087
145p	3.092	33.952	7.49	1.69	12.	0.27	24.1	100.7	100	3.89	33.891	7.52	26.938	112.7	0.115
178p	2.888	33.992	7.35	1.74	13.	0.06	24.9	95.9	125	3.50	33.927	7.47	27.004	106.3	0.143
214p	2.941	34.087	6.75	1.89	17.	0.06	27.7	89.2	150	3.06	33.961	7.47	27.073	99.8	0.169
254p	2.711	34.125	6.52	1.97	20.	0.06	29.0	84.4	200	2.92	34.051	6.99	27.158	91.8	0.217
303p	2.377	34.132	6.35	2.07	24.	0.03	30.0	81.2	250	2.74	34.125	6.53	27.232	84.8	0.262
368p	2.236	34.161	6.10	2.15	30.	0.04	31.4	77.9	300	2.40	34.133	6.36	27.268	81.4	0.304
471p	2.336	34.233	5.44	2.28	39.	0.04	33.3	73.3	400	2.25	34.182	5.91	27.319	76.5	0.385
666A	2.45	34.407	4.44	2.32	60.	0.02	34.5	61.0	500	2.04	34.260	5.26	27.372	71.5	0.461
766A	2.43	34.479	4.13	2.43	68.	0.02	34.9	55.4	600	2.43	34.349	4.73	27.437	65.3	0.532
865A	2.42	34.553	4.06	2.41	73.	0.02	34.7	51.2	700	2.45	34.434	4.32	27.504	59.0	0.598
963A	2.43	34.585	4.08	2.37	75.	0.02	34.2	47.4	800	2.42	34.499	4.10	27.558	53.9	0.659
1062A	2.46	34.635	4.14	2.29	76.	0.02	33.5	43.8	1000	2.45	34.606	4.10	27.641	45.9	0.768
1162A	2.37	34.653	4.13	2.27	79.	0.01	33.2	41.7	1200	2.06	34.663	4.15	27.694	40.9	0.867
1262A	2.34	34.679	4.19	2.24	80.	0.02	32.7	39.5	1500	2.24	34.730	4.08	27.758	34.9	1.003
1411A	2.29	34.712	4.33	2.21	81.	0.01	32.0	36.6	1750	2.16	34.764	4.60	27.791	31.7	1.107
1558A	2.212	34.741	4.57	2.14	82.	0.01	31.3	33.8	2000	1.91	34.764	4.76	27.812	29.8	1.206
1707A	2.180	34.760	4.58	2.09	81.	0.01	30.5	32.2	2250	1.64	34.755	4.70	27.825	28.5	1.300
1857A	2.097	34.770	4.67	2.05	81.	0.01	30.0	30.8	2500	1.35	34.733	4.69	27.829	28.2	1.390
2004A	1.901	34.764	4.76	2.06	87.	0.02	30.3	29.7	2750	1.03	34.719	4.61	27.838	27.3	1.476
2152A	1.719	34.756	4.71	2.09	94.	0.02	30.8	29.0							
2300A	1.603	34.754	5.07U	2.11	97.	0.02	30.9	28.4							
2448A	1.412	34.735	4.69	2.19	102.	0.02	31.6	28.5							
2595A	1.226	34.729	4.68	2.20	109.	0.02	32.1	27.7							
2744A	1.041	34.719	4.81	2.22	114.	0.02	32.2	27.3							
2842A	0.941	34.713	4.83	2.22	117.	0.02	32.5	27.1							

L) OXYGEN SAMPLES AT 1683 AND 1806 METERS APPEAR TO HAVE BEEN REVERSED. THEY ARE ASSUMED TO NOW BE IN THE CORRECT ORDER.
 F) AN ERROR OF -1 DMH, .058 PPT, HAS BEEN ASSUMED FOR THIS VALUE.

RV MELVILLE

INNOVED LLW XIII

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LATITUDE 49 47.4S		LONGITUDE 18 04.0W		MO/DAY/YR 12/ 5/78		MESSENGER 1421 1928		TIME GMT	BOTTOM 4263M	WIND 270	SPEED 21KT	WEATHER 5	DOMINANT WAVES 270 4 7			
Z	T	S	Q2	P04	S103	N02	N03	DT	Z	T	S	Q2	S10T	DT	DD	
1	3.70	33.868	7.64	1.54	8.	0.23	21.8	112.5	0	3.70	33.868	7.64	26.940	112.5	0.000	
11	3.69	33.867	7.71	1.55	8.	0.24	22.2	112.5	10	3.69	33.868	7.70	26.940	112.5	0.011	
52	3.63	33.870	7.68	1.57	8.	0.23	22.1	111.7	20	3.68	33.868	7.70	26.940	112.4	0.023	
82	3.58	33.883	7.61	1.58	9.	0.23	22.3	110.2	30	3.66	33.868	7.70	26.942	112.3	0.034	
110	2.91	33.987	7.41	1.78	14.	0.14	25.9	96.5	50	3.63	33.871	7.68	26.947	111.8	0.056	
144	2.77	34.014	7.29	1.83	15.	0.01	26.6	93.3	75	3.59	33.881	7.63	26.960	110.6	0.084	
185	2.58	34.078	6.89	1.93	19.	0.01	28.2	86.9	100	3.25	33.934	7.52	27.034	103.5	0.111	
216	2.38	34.093	6.71	2.02	22.	0.00	29.3	84.0	125	2.86	33.997	7.38	27.120	95.4	0.136	
267	2.04	34.123	6.47	2.17	28.	0.00	30.7	79.2	150	2.74	34.025	7.23	27.152	92.3	0.160	
328	1.95	34.164	6.08	2.22	34.	0.00	32.1	75.6	200	2.49	34.089	6.79	27.225	85.4	0.205	
368	2.06	34.219	5.61	2.29	40.	0.00	33.6	72.2	250	2.14	34.116	6.55	27.275	80.7	0.247	
419	2.12	34.265	5.28	2.35	46.	0.00	34.4	69.2	300	1.99	34.148	6.29	27.312	77.2	0.287	
479	2.29	34.337	4.81	2.43	54.	0.00	35.4	65.0	400	2.10	34.250	5.99	27.385	70.3	0.362	
480A	2.27	34.331	4.82	2.37	53.	0.00	34.0	65.3	500	2.29	34.351	4.74	27.451	64.0	0.431	
541	2.32	34.389	4.57	2.47	59.	0.00	36.0	61.3	600	2.33	34.428	4.58	27.510	58.4	0.495	
631A	2.33	34.446	4.29	2.46	66.	0.00	35.4	57.1	700	2.28	34.483	4.14	27.557	53.9	0.555	
782A	2.23	34.524	4.03	2.38	74.	0.01	35.1	50.4	800	2.23	34.535	4.03	27.602	49.6	0.610	
934A	2.286	34.609	4.05	2.42	79.	0.00	34.1	44.4	1000	2.27	34.638	4.08	27.681	42.2	0.711	
1085A	2.259	34.667	4.12	2.34	81.	0.00	33.2	39.8	1200	2.20	34.691	4.19	27.729	37.6	0.803	
1237A	2.180	34.695	4.21	2.22	84.	0.00	32.6	37.1	1500	2.05	34.739	4.43	27.780	32.8	0.928	
1389A	2.097	34.720	4.32	2.24	86.	0.01	31.9	34.5	1750	1.95	34.756	4.61	27.802	30.7	1.027	
1540A	2.041	34.744	4.47	2.17	86.	0.00	31.2	32.3	2000	1.68	34.747	4.64	27.815	29.4	1.121	
1692A	1.991	34.755	4.57	2.12	85.	0.01	30.6	31.1	2250	1.37	34.730	4.63	27.824	28.6	1.212	
1895A	1.818	34.756	4.67	2.14	91.	0.00	30.5	29.7	2500	1.10	34.717	4.72	27.832	27.9	1.298	
2097A	1.545	34.738	4.61	2.17	100.	0.00	31.3	29.2	2750	0.87	34.704	4.80	27.837	27.4	1.380	
2301A	1.314	34.727	4.64	2.18	107.	0.00	31.8	28.4	3000	0.66	34.694	4.88	27.842	26.9	1.459	
2504A	1.099	34.716	4.72	2.26	114.	0.01	32.3	27.9	3250	0.48	34.685	4.99	27.846	26.6	1.533	
2707A	0.908	34.706	4.79	2.29	118.	0.01	32.6	27.4	3500	0.33	34.678	5.06	27.849	26.3	1.603	
2911A	0.736	34.696	4.84	2.27	121.	0.02	32.8	27.2	3750	0.23	34.680	5.13	27.856	25.6	1.670	
3113A	0.563	34.690	4.93	2.32	124.	0.02	33.0	26.6	4000	0.10	34.671	5.26	27.856	25.3	1.734	
3317A	0.438	34.682	5.02	2.33	126.	0.02	33.3	26.5	4250	0.03	34.661	5.29	27.852	26.0	1.795	
3521A	0.319	34.677	5.06	2.32	128.	0.02	33.5	26.3								
3726B	0.241	34.680	5.12	2.33	129.	0.00	33.0	25.6								
3930B	0.133	34.671	5.23	2.33	132.	0.00	33.1	25.8								
4133B	0.051	34.671	5.30	2.38	134.	0.00	33.2	25.3								
4235B	0.029	34.662	5.29	2.37	134.	0.01	33.1	25.9								
										LATITUDE 49 48.9S		LONGITUDE 18 54.3W		39 D MO/DAY/YR 12/05/78		START TIME 1250 GMT

39 S				Z	T	S	SIGMA T	DT	DD
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME						
49 47.9S	18 54.0W	12/05/78	1856 GMT	0	3.712	33.859	26.931	113.3	0.000
				10	3.657	33.865	26.941	112.3	0.011
				20	3.627	33.863	26.943	112.2	0.023
				30	3.620	33.865	26.945	112.0	0.034
				40	3.609	33.864	26.945	111.9	0.045
				50	3.589	33.868	26.950	111.5	0.056
				75	3.579	33.870	26.953	111.2	0.084
				100	3.540	33.878	26.963	110.3	0.112
				125	3.054	33.974	27.085	98.7	0.138
				150	2.295	33.965	27.143	93.2	0.162
				175	2.161	34.009	27.189	88.9	0.185
				200	2.236	34.063	27.226	85.3	0.207
				225	2.188	34.094	27.254	82.6	0.229
				250	2.034	34.106	27.276	80.6	0.249
				275	2.006	34.131	27.298	78.5	0.269
				300	2.009	34.161	27.322	76.2	0.289
				350	2.018	34.205	27.356	73.0	0.327
				400	2.106	34.253	27.388	70.0	0.364
				450	2.236	34.303	27.417	67.2	0.399
				500	2.301	34.343	27.444	64.6	0.433
				550	2.332	34.377	27.468	62.3	0.466
				600	2.350	34.425	27.505	58.8	0.498
				650	2.362	34.458	27.531	56.4	0.528
				700	2.280	34.482	27.557	54.0	0.558
				750	2.229	34.503	27.578	52.0	0.586
				800	2.278	34.538	27.602	49.7	0.613
				850	2.298	34.570	27.625	47.4	0.640
				900	2.306	34.592	27.642	45.8	0.665
				950	2.301	34.613	27.659	44.2	0.690
				1000	2.314	34.638	27.678	42.4	0.715
				1100	2.278	34.667	27.704	40.0	0.761
				1200	2.251	34.688	27.723	38.2	0.806
				1300	2.236	34.712	27.744	36.2	0.850
				1400	2.175	34.729	27.762	34.5	0.892
				1500	2.121	34.736	27.772	33.5	0.934
				1600	2.078	34.746	27.784	32.4	0.974
				1700	2.007	34.752	27.794	31.4	1.014
				1800	1.927	34.752	27.801	30.9	1.053
				1900	1.844	34.753	27.808	30.2	1.092
				2000	1.748	34.750	27.813	29.7	1.130
				2100	1.587	34.739	27.816	29.4	1.167
				2200	1.464	34.732	27.819	29.1	1.203
				2300	1.335	34.724	27.822	28.8	1.239
				2400	1.209	34.719	27.827	28.3	1.274
				2500	1.117	34.714	27.829	28.1	1.309
				2600	1.021	34.707	27.830	28.1	1.342
				2700	0.923	34.704	27.834	27.7	1.376
				2800	0.810	34.699	27.837	27.4	1.408
				2900	0.751	34.695	27.838	27.3	1.439
				3000	0.657	34.692	27.841	27.0	1.470
				3100	0.570	34.688	27.843	26.8	1.501
				3200	0.512	34.686	27.845	26.6	1.530
				3300	0.445	34.683	27.847	26.5	1.559
				3400	0.384	34.681	27.849	26.3	1.587
				3500	0.332	34.679	27.850	26.2	1.615
				3600	0.276	34.678	27.852	26.0	1.642
				3700	0.232	34.675	27.852	26.0	1.669
				3800	0.180	34.674	27.854	25.8	1.695
				3900	0.144	34.670	27.853	25.9	1.720
				4000	0.101	34.669	27.855	25.7	1.745
				4100	0.069	34.668	27.855	25.7	1.770
				4200	0.039	34.666	27.855	25.7	1.794
				4257	0.030	34.663	27.853	25.8	1.808

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HV MELVILLE

INDOMED LEG XIII

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LATITUDE 51 20.4S		LONGITUDE 23 01.0W		MO/DAY/YR 12/ 1/78		MESSENGER 0507 0841		TIME GMT	BOTTOM 4637M	WIND USV	SPEED 11KT	WEATHER 4	DOMINANT WAVES 320 3 8		
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	O2	S16T	DT	UD
1	3.09	33.824	7.84	1.51	10.	0.26	21.5	110.3	0	3.09	33.824	7.84	26.962	110.3	0.000
26	2.96	33.833	7.75	1.53	8.	0.23	21.6	108.6	10	3.05	33.828	7.80	26.968	109.8	0.011
52	2.76	33.846	7.74	1.57	9.	0.26	22.0	105.9	20	3.00	33.832	7.76	26.976	109.0	0.022
77	2.60	33.848	7.78	1.61	10.	0.26	22.5	104.5	30	2.94	33.837	7.75	26.985	108.1	0.033
103	2.51	33.850	7.70	1.63	12.	0.27	22.7	103.6	40	2.78	33.847	7.74	27.007	106.1	0.054
133	2.15	33.864	7.71	1.69	14.	0.26	24.0	99.8	75	2.61	33.849	7.78	27.023	104.5	0.081
164	1.35	33.901	7.63	1.90	24.	0.11	27.6	91.4	100	2.52	33.851	7.71	27.032	103.7	0.107
194	1.24	33.944	7.46	1.96	25.	0.09	28.5	87.4	125	2.28	33.860	7.71	27.059	101.1	0.133
225	1.33	34.014	7.12	2.03	29.	0.05	29.5	82.7	150	1.70	33.883	7.68	27.122	95.2	0.157
266	1.49	34.101	6.47	2.14	33.	0.01	31.3	77.1	200	1.25	33.958	7.41	27.213	86.5	0.203
318	1.59	34.160	6.04	2.22	38.	0.00	32.5	73.3	250	1.43	34.071	6.72	27.292	79.1	0.245
379	1.82	34.264	5.28	2.35	49.	0.00	34.6	67.0	300	1.56	34.143	6.18	27.340	74.5	0.283
419	1.86	34.304	5.05	2.40	54.	0.01	35.3	64.3	400	1.84	34.286	5.13	27.434	65.6	0.355
460	1.57	34.351	5.04	2.43	61.	0.01	35.8	60.2	500	1.64	34.384	4.80	27.528	56.7	0.417
551	1.87	34.455	4.44	2.46	72.	0.01	36.4	52.9	600	1.93	34.496	4.28	27.596	50.3	0.473
653	1.95	34.528	4.18	2.48	79.	0.00	36.5	48.0	700	1.98	34.556	4.13	27.639	46.1	0.524
754	2.01	34.582	4.10	2.44	83.	0.00	35.8	44.3	800	2.05	34.603	4.09	27.671	43.1	0.572
863A	2.08	34.624	4.07	2.42	84.	0.01	34.7	41.7	1000	1.99	34.660	4.13	27.721	38.4	0.662
1015A	1.98	34.662	4.14	2.35	89.	0.00	34.4	38.1	1200	1.96	34.704	4.22	27.759	34.8	0.745
1166A	1.98	34.696	4.16	2.26	91.	0.00	33.3	35.5	1500	1.84	34.740	4.52	27.797	31.1	0.862
1317A	1.89	34.723	4.44	2.23	92.	0.00	32.7	32.8	1750	1.64	34.745	4.64	27.817	29.2	0.954
1467A	1.85	34.737	4.50	2.18	92.	0.00	31.8	31.4	2000	1.82	34.730	4.67	27.828	28.2	1.041
1668A	1.732	34.747	4.62	2.14	93.	0.00	31.4	29.8	2250	1.09	34.718	4.75	27.834	27.7	1.125
1867A	1.482	34.740	4.65	2.18	102.	0.01	31.9	28.6	2500	0.92	34.714	4.81	27.842	26.9	1.205
2068A	1.238	34.725	4.69	2.20	109.	0.01	32.6	28.1	2750	0.75	34.700	4.88	27.842	27.0	1.283
2268A	1.078	34.717	4.76	2.22	113.	0.01	32.7	27.7	3000	0.56	34.693	4.95	27.847	26.5	1.359
2467A	0.938	34.716	4.80	2.24	117.	0.01	33.1	26.9	3250	0.45	34.686	5.01	27.848	26.3	1.431
2668A	0.817	34.703	4.86	2.25	120.	0.01	33.2	27.1	3500	0.40	34.680	5.10	27.852	26.0	1.500
2867A	0.651	34.695	4.90	2.27	122.	0.01	33.3	26.8	3750	0.16	34.674	5.21	27.855	25.7	1.566
3066A	0.525	34.691	4.97	2.31	125.	0.01	33.5	26.3	4000	0.09	34.670	5.25	27.855	25.7	1.628
3265A	0.443	34.685	5.01	2.32	126.	0.01	33.7	26.3	4250	0.05	34.669	5.31	27.856	25.6	1.689
3463A	0.323	34.680	5.08	2.30	129.	0.01	33.8	26.1	4500	0.03	34.665	5.34	27.854	25.8	1.749
3661A	0.196	34.676	5.18	2.32	131.	0.01	33.8	25.7	4750	-0.01	34.662	5.36	27.855	25.7	1.809
3860A	0.125	34.671	5.24	2.32	133.	0.00	33.8	25.7							
4058A	0.080	34.668	5.26	2.32	133.	0.00	33.8	25.7							
4256A	0.049	34.668	5.31	2.30	133.	0.02	33.7	25.6							
4453A	0.025	34.664	5.33	2.30	133.	0.00	33.7	25.7							
4601A	0.040	34.664	5.35	2.32	133.	0.00	33.7	25.8							
4750A	-0.007	34.662	5.36	2.28	132.	0.00	33.7	25.7							

41 S						INDOMED LEG XIII CTD						41 U					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
51 22. S	23 19. W	12/07/78	0804 GMT			51 19.4S	23 23.4W	12/07/78	0317 GMT								
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	3.090	33.826	26.964	110.2	0.000	0	2.857	33.845	27.000	106.8	0.000	0	2.857	33.845	27.000	106.8	0.000
10	3.083	33.829	26.967	109.9	0.011	10	2.847	33.848	27.003	106.5	0.011	10	2.847	33.848	27.003	106.5	0.011
20	3.032	33.832	26.974	109.2	0.022	20	2.836	33.848	27.004	106.4	0.021	20	2.836	33.848	27.004	106.4	0.021
30	2.949	33.844	26.991	107.6	0.033	30	2.813	33.849	27.007	106.1	0.032	30	2.813	33.849	27.007	106.1	0.032
40	2.864	33.847	27.001	106.7	0.044	40	2.756	33.851	27.013	105.5	0.043	40	2.756	33.851	27.013	105.5	0.043
50	2.782	33.849	27.009	105.9	0.054	50	2.725	33.852	27.017	105.2	0.053	50	2.725	33.852	27.017	105.2	0.053
75	2.681	33.852	27.021	104.8	0.081	75	2.715	33.853	27.018	105.0	0.079	75	2.715	33.853	27.018	105.0	0.079
100	2.560	33.854	27.032	103.7	0.107	100	2.704	33.854	27.020	104.8	0.106	100	2.704	33.854	27.020	104.8	0.106
125	2.481	33.856	27.041	102.9	0.133	125	2.630	33.855	27.027	104.2	0.132	125	2.630	33.855	27.027	104.2	0.132
150	1.992	33.874	27.094	97.6	0.158	150	2.490	33.859	27.042	102.8	0.158	150	2.490	33.859	27.042	102.8	0.158
175	1.408	33.904	27.160	91.5	0.182	175	1.808	33.894	27.124	95.0	0.183	175	1.808	33.894	27.124	95.0	0.183
200	1.288	33.932	27.191	88.6	0.204	200	1.257	33.957	27.213	66.5	0.206	200	1.257	33.957	27.213	66.5	0.206
225	1.241	33.984	27.236	84.4	0.226	225	1.399	34.029	27.264	61.7	0.227	225	1.399	34.029	27.264	61.7	0.227
250	1.453	34.061	27.283	79.9	0.247	250	1.432	34.060	27.284	79.9	0.247	250	1.432	34.060	27.284	79.9	0.247
275	1.520	34.115	27.321	76.3	0.266	275	1.553	34.112	27.317	76.7	0.267	275	1.553	34.112	27.317	76.7	0.267
300	1.579	34.152	27.347	73.9	0.285	300	1.582	34.156	27.350	73.6	0.286	300	1.582	34.156	27.350	73.6	0.286
350	1.725	34.234	27.402	68.7	0.322	350	1.710	34.221	27.393	69.5	0.322	350	1.710	34.221	27.393	69.5	0.322
400	1.788	34.295	27.446	64.5	0.356	400	1.966	34.308	27.443	64.8	0.357	400	1.966	34.308	27.443	64.8	0.357
450	1.590	34.342	27.498	59.5	0.387	450	2.073	34.372	27.485	60.7	0.389	450	2.073	34.372	27.485	60.7	0.389
500	1.727	34.401	27.535	56.0	0.417	500	2.016	34.407	27.518	57.6	0.419	500	2.016	34.407	27.518	57.6	0.419
550	1.871	34.464	27.575	52.2	0.445	550	1.955	34.440	27.549	54.7	0.449	550	1.955	34.440	27.549	54.7	0.449
600	1.904	34.495	27.597	50.2	0.472	600	2.042	34.492	27.584	51.4	0.476	600	2.042	34.492	27.584	51.4	0.476
650	1.945	34.534	27.625	47.5	0.498	650	2.068	34.518	27.603	49.6	0.503	650	2.068	34.518	27.603	49.6	0.503
700	1.986	34.553	27.637	46.4	0.523	700	2.062	34.550	27.627	47.3	0.529	700	2.062	34.550	27.627	47.3	0.529
750	2.008	34.578	27.655	44.6	0.547	750	2.084	34.577	27.648	45.3	0.554	750	2.084	34.577	27.648	45.3	0.554
800	2.030	34.606	27.676	42.7	0.571	800	2.064	34.597	27.666	43.6	0.578	800	2.064	34.597	27.666	43.6	0.578
850	1.999	34.620	27.689	41.4	0.593	850	2.045	34.611	27.679	42.4	0.601	850	2.045	34.611	27.679	42.4	0.601
900	1.990	34.639	27.705	39.9	0.616	900	2.029	34.640	27.703	40.1	0.624	900	2.029	34.640	27.703	40.1	0.624
950	1.971	34.657	27.721	38.4	0.637	950	2.013	34.655	27.716	38.8	0.646	950	2.013	34.655	27.716	38.8	0.646
						1000	2.000	34.666	27.726	37.9	0.667	1000	2.000	34.666	27.726	37.9	0.667
						1100	1.989	34.692	27.748	35.9	0.709	1100	1.989	34.692	27.748	35.9	0.709
						1200	1.959	34.704	27.760	34.7	0.750	1200	1.959	34.704	27.760	34.7	0.750
						1300	1.933	34.719	27.774	33.4	0.789	1300	1.933	34.719	27.774	33.4	0.789
						1400	1.886	34.733	27.789	32.0	0.828	1400	1.886	34.733	27.789	32.0	0.828
						1500	1.811	34.740	27.800	30.9	0.866	1500	1.811	34.740	27.800	30.9	0.866
						1600	1.705	34.739	27.807	30.2	0.903	1600	1.705	34.739	27.807	30.2	0.903
						1700	1.618	34.739	27.814	29.6	0.939	1700	1.618	34.739	27.814	29.6	0.939
						1800	1.529	34.734	27.816	29.4	0.974	1800	1.529	34.734	27.816	29.4	0.974
						1900	1.435	34.731	27.821	28.9	1.010	1900	1.435	34.731	27.821	28.9	1.010
						2000	1.367	34.729	27.824	28.6	1.045	2000	1.367	34.729	27.824	28.6	1.045
						2100	1.254	34.723	27.827	28.3	1.079	2100	1.254	34.723	27.827	28.3	1.079
						2200	1.204	34.720	27.828	28.2	1.113	2200	1.204	34.720	27.828	28.2	1.113
						2300	1.125	34.719	27.833	27.8	1.147	2300	1.125	34.719	27.833	27.8	1.147
						2400	1.048	34.715	27.835	27.6	1.180	2400	1.048	34.715	27.835	27.6	1.180
						2500	0.960	34.712	27.838	27.3	1.213	2500	0.960	34.712	27.838	27.3	1.213
						2600	0.876	34.706	27.839	27.2	1.245	2600	0.876	34.706	27.839	27.2	1.245
						2700	0.787	34.703	27.842	26.9	1.276	2700	0.787	34.703	27.842	26.9	1.276
						2800	0.698	34.699	27.844	26.7	1.307	2800	0.698	34.699	27.844	26.7	1.307
						2900	0.613	34.694	27.846	26.6	1.337	2900	0.613	34.694	27.846	26.6	1.337
						3000	0.560	34.691	27.846	26.5	1.366	3000	0.560	34.691	27.846	26.5	1.366
						3100	0.485	34.688	27.848	26.3	1.395	3100	0.485	34.688	27.848	26.3	1.395
						3200	0.418	34.685	27.850	26.2	1.424	3200	0.418	34.685	27.850	26.2	1.424
						3300	0.379	34.684	27.851	26.1	1.452	3300	0.379	34.684	27.851	26.1	1.452
						3400	0.315	34.681	27.852	25.9	1.479	3400	0.315	34.681	27.852	25.9	1.479
						3500	0.274	34.679	27.853	25.9	1.506	3500	0.274	34.679	27.853	25.9	1.506
						3600	0.221	34.677	27.854	25.7	1.532	3600	0.221	34.677	27.854	25.7	1.532
						3700	0.198	34.675	27.854	25.8	1.558	3700	0.198	34.675	27.854	25.8	1.558
						3800	0.158	34.674	27.856	25.7	1.584	3800	0.158	34.674	27.856	25.7	1.584
						3900	0.123	34.672	27.856	25.6	1.609	3900	0.123	34.672	27.856	25.6	1.609
						4000	0.088	34.671	27.857	25.5	1.634	4000	0.088	34.671	27.857	25.5	1.634
						4100	0.070	34.670	27.857	25.5	1.658	4100	0.070	34.670	27.857	25.5	1.658
						4200	0.062	34.669	27.857	25.5	1.682	4200	0.062	34.669	27.857	25.5	1.682
						4300	0.058	34.668	27.856	25.6	1.706	4300	0.058	34.668	27.856	25.6	1.706
						4400	0.039	34.668	27.857	25.5	1.730	4400	0.039	34.668	27.857	25.5	1.730
						4500	0.015	34.665	27.856	25.6	1.754	4500	0.015	34.665	27.856	25.6	1.754
						4600	-0.001	34.667	27.858	25.4	1.778	4600	-0.001	34.667	27.858	25.4	1.778
						4700	-0.019	34.665	27.858	25.5	1.801	4700	-0.019	34.665	27.858	25.5	1.801
						4764	-0.028	34.665	27.858	25.4	1.816	4764	-0.028	34.665	27.858	25.4	1.816

RV MELVILLE

INJURED L&G XIII

42

	LATITUDE	LONGITUDE	MO/DAY/YR		MESSENGER		TIME	BOTTOM	MINU	SPEED	WEATHER	DOMINANT WAVES			
	51 48.4S	25 00.0W	12/ 7/78		1952 2329		GMT	3390M	10U	16KT	6				
Z	T	S	U2	PO4	SI03	NO2	NO3	DT	Z	T	S	O2	SI0T	DT	DD
1	2.87	33.831	7.82	1.51	9.	0.26	21.4	108.0	0	2.87	33.831	7.82	26.987	108.0	0.000
11	2.86	33.830	7.86	1.53	10.	0.27	21.6	107.9	10	2.86	33.832	7.86	26.987	107.9	0.011
52	2.77	33.846	7.79	1.55	9.	0.25	21.9	106.0	20	2.84	33.834	7.84	26.991	107.6	0.022
103	2.70	33.847	7.71	1.57	10.	0.27	22.0	105.3	30	2.82	33.838	7.83	26.996	107.1	0.032
133	1.54	33.910	7.54	1.85	22.	0.12	27.0	92.0	50	2.77	33.846	7.79	27.007	106.1	0.054
168	1.30	34.001	7.13	2.04	28.	0.04	29.2	83.5	75	2.74	33.848	7.77	27.011	105.7	0.080
204	1.38	34.081	6.61	2.10	33.	0.03	30.5	77.9	100	2.70	33.848	7.72	27.014	105.4	0.107
255	1.78	34.217	5.57	2.28	43.	0.02	33.2	70.3	125	1.85	33.890	7.60	27.116	95.7	0.132
305	1.89	34.265	5.27	2.34	49.	0.01	34.0	67.5	150	1.42	33.964	7.36	27.207	87.2	0.155
356	1.99	34.336	4.88	2.40	57.	0.00	35.1	62.8	200	1.37	34.074	6.67	27.299	78.4	0.197
407	2.12	34.410	4.35	2.44	65.	0.00	35.6	58.2	250	1.74	34.206	5.66	27.378	71.0	0.234
457	2.13	34.453	4.35	2.47	69.	0.00	35.6	55.0	300	1.09	34.263	5.29	27.412	67.7	0.269
533	2.229	34.510	4.24	2.45	74.	0.01	35.6	51.5	400	2.10	34.402	4.41	27.506	58.8	0.334
606A	2.20	34.541	4.04	2.31U	76.	0.01	35.7	48.9	500	2.19	34.488	4.30	27.568	52.8	0.392
660	2.202	34.582	4.04	2.43	80.	0.03	35.3	45.8	600	2.20	34.538	4.05	27.607	49.1	0.446
708A	2.16	34.591	4.04	2.38	81.	0.00	35.6	44.8	700	2.17	34.591	4.04	27.652	44.9	0.496
809A	2.20	34.636	4.04	2.36	83.	0.00	34.9	41.7	800	2.19	34.632	4.04	27.683	42.0	0.543
911A	2.16	34.663	4.08	2.28	85.	0.01	34.4	39.3	1000	2.14	34.689	4.14	27.733	37.2	0.632
1019A	2.13	34.694	4.16	2.27	85.	0.01	33.6	36.8	1200	2.04	34.724	4.28	27.769	33.9	0.713
1216A	2.03	34.725	4.29	2.13	88.	0.00	32.6	33.7	1500	1.93	34.754	4.55	27.802	30.7	0.829
1368A	1.98	34.743	4.48	2.15	88.	0.01	31.9	31.9	1750	1.71	34.752	4.66	27.817	29.5	0.921
1520A	1.92	34.755	4.56	2.11	88.	0.01	31.5	30.6	2000	1.58	34.756	4.70	27.828	28.3	1.009
1673A	1.788	34.755	4.71	2.07	90.	0.01	31.2	29.6	2250	1.10	34.718	4.73	27.834	27.7	1.094
1824A	1.624	34.748	4.61	2.13	96.	0.02	31.3	29.0	2500	0.85	34.707	4.81	27.841	27.0	1.174
1977A	1.408	34.737	4.70	2.16	103.	0.00	32.4	28.3	2750	0.68	34.697	4.87	27.844	26.8	1.251
2130A	1.24 K	34.726	4.69	2.20	109.	0.00	32.7	28.0	3000	0.52	34.689	4.98	27.847	26.5	1.325
2281A	1.065	34.716	4.74	2.24	113.	0.00	32.9	27.7	3250	0.37	34.682	5.08	27.850	26.2	1.396
2435A	0.895	34.709	4.79	2.27	117.	0.00	33.2	27.1							
2588A	0.794	34.703	4.83	2.27	119.	0.00	33.4	27.0							
2740A	0.682	34.697	4.87	2.27	121.	0.00	33.4	26.8							
2893A	0.587	34.692	4.93	2.27	123.	0.02	33.4	26.6							
3047A	0.487	34.687	5.00	2.27	125.	0.01	33.6	26.4							
3201A	0.406	34.683	5.03	2.29	126.	0.01	33.7	26.3							
3303A	0.326	34.679	5.15	2.11U	126.	0.02	33.8	26.2							

42 S						INDOMED LEG XIII CTU						42 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
51 48.2S	25 21.14	12/07/78	2258 GMT			51 48.7S	25 19.4W	12/07/78	1840 GMT			51 48.7S	25 19.4W	12/07/78	1840 GMT		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	2.854	33.852	26.990	107.7	0.000	0	2.947	33.851	26.981	108.6	0.000	0	2.947	33.851	26.981	108.6	0.000
10	2.837	33.835	26.993	107.4	0.011	10	2.916	33.839	26.990	107.7	0.011	10	2.916	33.839	26.990	107.7	0.011
20	2.759	33.847	27.010	105.8	0.021	20	2.821	33.848	27.005	106.3	0.022	20	2.821	33.848	27.005	106.3	0.022
30	2.736	33.848	27.013	105.6	0.032	30	2.799	33.851	27.010	105.8	0.032	30	2.799	33.851	27.010	105.8	0.032
40	2.735	33.848	27.013	105.5	0.043	40	2.789	33.852	27.011	105.7	0.043	40	2.789	33.852	27.011	105.7	0.043
50	2.736	33.848	27.013	105.6	0.053	50	2.785	33.852	27.012	105.7	0.053	50	2.785	33.852	27.012	105.7	0.053
75	2.734	33.850	27.014	105.4	0.080	75	2.777	33.852	27.012	105.6	0.080	75	2.777	33.852	27.012	105.6	0.080
100	2.687	33.850	27.018	105.0	0.106	100	2.667	33.847	27.018	105.1	0.106	100	2.667	33.847	27.018	105.1	0.106
125	2.584	33.860	27.052	101.9	0.132	125	2.278	33.865	27.064	100.7	0.132	125	2.278	33.865	27.064	100.7	0.132
150	1.370	33.946	27.197	88.1	0.156	150	1.424	33.951	27.197	88.1	0.156	150	1.424	33.951	27.197	88.1	0.156
175	1.308	34.018	27.259	82.2	0.177	175	1.386	34.022	27.256	82.4	0.177	175	1.386	34.022	27.256	82.4	0.177
200	1.372	34.072	27.297	78.5	0.197	200	1.432	34.081	27.300	78.3	0.197	200	1.432	34.081	27.300	78.3	0.197
225	1.521	34.142	27.343	74.2	0.217	225	1.552	34.152	27.349	73.7	0.217	225	1.552	34.152	27.349	73.7	0.217
250	1.695	34.199	27.376	71.1	0.235	250	1.683	34.192	27.371	71.5	0.235	250	1.683	34.192	27.371	71.5	0.235
275	1.833	34.236	27.398	69.3	0.253	275	1.861	34.243	27.399	68.9	0.253	275	1.861	34.243	27.399	68.9	0.253
300	1.953	34.277	27.419	67.0	0.270	300	1.896	34.273	27.420	66.9	0.270	300	1.896	34.273	27.420	66.9	0.270
350	2.000	34.337	27.463	62.0	0.303	350	1.980	34.350	27.475	61.7	0.303	350	1.980	34.350	27.475	61.7	0.303
400	2.087	34.406	27.512	58.2	0.334	400	2.083	34.400	27.507	58.7	0.334	400	2.083	34.400	27.507	58.7	0.334
450	2.185	34.457	27.544	55.1	0.364	450	2.113	34.440	27.537	55.9	0.363	450	2.113	34.440	27.537	55.9	0.363
500	2.178	34.493	27.574	52.3	0.392	500	2.166	34.478	27.563	53.4	0.392	500	2.166	34.478	27.563	53.4	0.392
550	2.283	34.530	27.595	50.4	0.419	550	2.190	34.508	27.585	51.3	0.419	550	2.190	34.508	27.585	51.3	0.419
600	2.253	34.555	27.617	48.2	0.445	600	2.205	34.540	27.609	49.0	0.446	600	2.205	34.540	27.609	49.0	0.446
650	2.212	34.586	27.645	45.6	0.470	650	2.196	34.563	27.628	47.2	0.471	650	2.196	34.563	27.628	47.2	0.471
679	2.185	34.595	27.655	44.7	0.484	700	2.182	34.586	27.648	45.3	0.496	700	2.182	34.586	27.648	45.3	0.496
						750	2.202	34.614	27.668	43.4	0.520	750	2.202	34.614	27.668	43.4	0.520
						800	2.220	34.634	27.683	42.0	0.543	800	2.220	34.634	27.683	42.0	0.543
						850	2.212	34.654	27.700	40.4	0.566	850	2.212	34.654	27.700	40.4	0.566
						900	2.178	34.665	27.711	39.3	0.588	900	2.178	34.665	27.711	39.3	0.588
						950	2.137	34.681	27.727	37.8	0.610	950	2.137	34.681	27.727	37.8	0.610
						1000	2.155	34.697	27.738	36.7	0.631	1000	2.155	34.697	27.738	36.7	0.631
						1100	2.106	34.712	27.754	35.2	0.672	1100	2.106	34.712	27.754	35.2	0.672
						1200	2.038	34.722	27.768	34.0	0.712	1200	2.038	34.722	27.768	34.0	0.712
						1300	2.006	34.737	27.782	32.6	0.752	1300	2.006	34.737	27.782	32.6	0.752
						1400	1.964	34.746	27.793	31.6	0.790	1400	1.964	34.746	27.793	31.6	0.790
						1500	1.932	34.751	27.799	31.0	0.828	1500	1.932	34.751	27.799	31.0	0.828
						1600	1.848	34.756	27.810	30.0	0.865	1600	1.848	34.756	27.810	30.0	0.865
						1700	1.759	34.754	27.815	29.5	0.902	1700	1.759	34.754	27.815	29.5	0.902
						1800	1.646	34.749	27.820	29.0	0.938	1800	1.646	34.749	27.820	29.0	0.938
						1900	1.502	34.740	27.823	28.7	0.973	1900	1.502	34.740	27.823	28.7	0.973
						2000	1.378	34.733	27.826	28.4	1.008	2000	1.378	34.733	27.826	28.4	1.008
						2100	1.271	34.727	27.829	28.1	1.042	2100	1.271	34.727	27.829	28.1	1.042
						2200	1.164	34.721	27.832	27.9	1.076	2200	1.164	34.721	27.832	27.9	1.076
						2300	1.036	34.715	27.835	27.5	1.109	2300	1.036	34.715	27.835	27.5	1.109
						2400	0.933	34.710	27.838	27.3	1.141	2400	0.933	34.710	27.838	27.3	1.141
						2500	0.853	34.707	27.841	27.0	1.173	2500	0.853	34.707	27.841	27.0	1.173
						2600	0.778	34.702	27.842	27.0	1.204	2600	0.778	34.702	27.842	27.0	1.204
						2700	0.708	34.699	27.844	26.8	1.235	2700	0.708	34.699	27.844	26.8	1.235
						2800	0.637	34.696	27.846	26.6	1.265	2800	0.637	34.696	27.846	26.6	1.265
						2900	0.575	34.691	27.845	26.6	1.294	2900	0.575	34.691	27.845	26.6	1.294
						3000	0.520	34.690	27.848	26.4	1.324	3000	0.520	34.690	27.848	26.4	1.324
						3100	0.460	34.686	27.848	26.4	1.352	3100	0.460	34.686	27.848	26.4	1.352
						3200	0.397	34.684	27.850	26.2	1.380	3200	0.397	34.684	27.850	26.2	1.380
						3300	0.322	34.681	27.852	26.0	1.408	3300	0.322	34.681	27.852	26.0	1.408

NV MELVILLE

INNOVED LLE XIII

43

LATITUDE 51 54.9S		LONGITUDE 28 05.9W		MO/DAY/YR 12/ 8/78		MESSENGER 1421 1028		TIME GMT		BOTTOM 4748M		WIND SPEED		WEATHER 1		DOMINANT WAVES 49	
Z	T	S	U2	P04	S103	N02	N03	UT	Z	T	S	U2	S10T	UT	DD		
1	2.59	33.864	7.90	1.39	6.	0.16	20.5	103.2	0	2.59	33.864	7.90	27.038	103.2	0.000		
53	2.32	33.887	7.85	1.48	6.	0.18	21.2	99.3	10	2.54	33.868	7.89	27.044	102.6	0.010		
73	2.22	33.902	7.83	1.48	7.	0.21	21.8	97.4	20	2.49	33.871	7.88	27.051	101.9	0.021		
94	2.18	33.908	7.86	1.50	7.	0.22	21.9	96.7	30	2.44	33.875	7.87	27.058	101.2	0.031		
109	1.83	33.914	7.65	2.06	29.	0.17	29.2	93.7	50	2.34	33.886	7.85	27.076	99.6	0.051		
124	0.97	33.987	7.29	2.06	29.	0.17	29.3	82.5	75	2.22	33.903	7.83	27.099	97.4	0.075		
145	0.86	34.032	7.08	2.10	36.	0.15	30.3	78.4	100	2.09	33.908	7.80	27.113	96.1	0.100		
176	1.45	34.160	6.02	2.25	41.	0.02	32.4	72.4	125	0.96	33.993	7.28	27.260	82.1	0.122		
217	1.79	34.269	5.29	2.33	51.	0.02	34.2	66.4	150	0.93	34.052	6.92	27.310	77.4	0.142		
258	1.92	34.338	4.87	2.42	59.	0.00	35.4	62.2	200	1.69	34.232	5.53	27.402	68.7	0.179		
307	1.97	34.408	4.52	2.47	67.	0.00	36.1	57.2	250	1.91	34.327	4.94	27.462	62.9	0.212		
368	2.04	34.466	4.32	2.50	72.	0.00	36.1	53.3	300	1.97	34.400	4.56	27.516	57.9	0.243		
429	2.13	34.526	4.12	2.47	77.	0.02	36.0	49.5	400	2.09	34.499	4.21	27.585	51.3	0.299		
490	2.15	34.566	4.07	2.48	80.	0.01	35.7	46.6	500	2.15	34.573	4.07	27.639	46.2	0.350		
560	2.15	34.598	4.08	2.44	82.	0.04	35.0	44.2	600	2.16	34.613	4.08	27.670	43.2	0.397		
641	2.17	34.626	4.07	2.36	83.	0.01	34.8	42.2	700	2.10	34.646	4.07	27.701	40.2	0.442		
732	2.06	34.655	4.07	2.36	87.	0.01	34.3	39.2	800	2.02	34.672	4.09	27.729	37.6	0.485		
813	2.01	34.674	4.09	2.32	89.	0.00	34.4	37.4	1000	1.83	34.698	4.21	27.764	34.3	0.565		
909A	1.94	34.702	4.11	2.24	92.		33.8	34.7	1200	1.89	34.739	4.46	27.792	31.6	0.640		
1020	1.82	34.697	4.24	2.30	94.	0.01	33.6	34.2	1500	1.52	34.735	4.62	27.817	29.2	0.748		
1114A	1.93	34.727	4.35	2.19	92.		32.6	32.8	1750	1.29	34.727	4.64	27.828	28.3	0.832		
1265A	1.66	34.745	4.53	2.13	92.		31.8	30.9	2000	0.99	34.708	4.71	27.833	27.8	0.914		
1418A	1.53	34.727	4.55	2.22	101.		32.6	29.9	2250	0.75	34.698	4.85	27.839	27.2	0.992		
1572A	1.51	34.741	4.67	2.14	101.		32.0	28.7	2500	0.58	34.689	4.79	27.843	26.8	1.066		
1725A	1.323	34.729	4.63	2.20	108.		32.4	28.3	2750	0.46	34.683	4.93	27.846	26.6	1.139		
1877A	1.124	34.717	4.70	2.24	114.		32.8	28.0	3000	0.34	34.678	5.00	27.848	26.4	1.209		
2030A	0.954	34.706	4.72	2.27	118.		33.1	27.7	3250	0.25	34.672	5.05	27.849	26.3	1.277		
2184A	0.807	34.699	4.85	2.25	121.		33.3	27.4	3500	0.19	34.671	5.13	27.851	26.1	1.343		
2387A	0.654	34.694	4.86	2.29	124.		33.5	26.8	3750	0.12	34.668	5.16	27.852	26.0	1.407		
2590A	0.528	34.685	4.76	2.29	126.		33.9	26.8	4000	0.06	34.667	5.25	27.854	25.8	1.469		
2793A	0.44	34.682	4.98	2.29	127.		33.8	26.5	4250	-0.04	34.661	5.37	27.855	25.7	1.529		
2997A	0.340	34.677	4.67U	2.29	129.		34.1	26.4	4500	-0.21	34.655	5.60	27.858	25.4	1.584		
3201A	0.261	34.672	5.01	2.29	130.		34.1	26.3	4750	-0.37	34.643	5.73	27.857	25.5	1.634		
3402A	0.209	34.671	5.15	2.29	131.		34.1	26.1									
3606A	0.168	34.670	5.14	2.30	131.		34.1	26.0									
3809A	0.107	34.666	5.17	2.30	132.		34.2	26.0									
3961A	0.079	34.667	5.22	2.32	133.		34.1	25.8									
4114A	0.013	34.663	5.33	2.31	131.		34.1	25.8									
4214A	-0.024	34.662	5.35	2.30	130.		33.0	25.7									
4314A	-0.083	34.658	5.42	2.30	129.		32.9	25.7									
4416A	-0.135	34.658	5.50	2.28	128.		33.1	25.4									
4567A	-0.272	34.651	5.67	2.29	126.		32.0U	25.3									
4719A	-0.351	34.644	5.72	2.28	124.		33.0	25.5									

43 S						INDOMED LEG XIII CTD						43 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
51 54.6S	28 08.8W	12/06/78	1747 GMT			51 55.5S	28 05.0W	12/06/78	1246 GMT			51 55.5S	28 05.0W	12/06/78	1246 GMT		
Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU
0	2.649	33.866	27.034	103.5	0.000	0	2.980	33.846	26.990	107.7	0.000	0	2.980	33.846	26.990	107.7	0.000
10	2.565	33.863	27.039	103.0	0.010	10	2.949	33.846	26.992	107.5	0.011	10	2.949	33.846	26.992	107.5	0.011
20	2.535	33.862	27.041	102.9	0.021	20	2.962	33.845	26.990	107.7	0.022	20	2.962	33.845	26.990	107.7	0.022
30	2.456	33.869	27.033	101.7	0.031	30	2.940	33.846	26.993	107.4	0.032	30	2.940	33.846	26.993	107.4	0.032
40	2.368	33.880	27.069	100.2	0.041	40	2.936	33.847	26.994	107.3	0.043	40	2.936	33.847	26.994	107.3	0.043
50	2.323	33.887	27.078	99.3	0.051	50	2.813	33.852	27.009	105.9	0.054	50	2.813	33.852	27.009	105.9	0.054
75	2.229	33.901	27.097	97.6	0.076	75	2.328	33.874	27.067	100.4	0.080	75	2.328	33.874	27.067	100.4	0.080
100	2.181	33.907	27.106	96.7	0.100	100	1.116	33.968	27.231	84.8	0.103	100	1.116	33.968	27.231	84.8	0.103
125	0.962	33.996	27.264	81.8	0.122	125	1.160	34.033	27.280	80.2	0.123	125	1.160	34.033	27.280	80.2	0.123
150	1.156	34.100	27.334	75.0	0.142	150	1.338	34.105	27.326	75.8	0.143	150	1.338	34.105	27.326	75.8	0.143
175	1.592	34.202	27.386	70.2	0.160	175	1.524	34.172	27.367	72.0	0.162	175	1.524	34.172	27.367	72.0	0.162
200	1.912	34.266	27.413	67.6	0.178	200	1.719	34.235	27.403	68.5	0.179	200	1.719	34.235	27.403	68.5	0.179
225	1.827	34.292	27.441	65.0	0.194	225	1.824	34.278	27.430	66.0	0.196	225	1.824	34.278	27.430	66.0	0.196
250	1.947	34.340	27.470	62.2	0.211	250	1.881	34.329	27.466	62.6	0.213	250	1.881	34.329	27.466	62.6	0.213
275	1.995	34.380	27.498	59.5	0.226	275	2.030	34.372	27.489	60.4	0.228	275	2.030	34.372	27.489	60.4	0.228
300	1.986	34.412	27.524	57.0	0.241	300	2.019	34.398	27.510	58.3	0.243	300	2.019	34.398	27.510	58.3	0.243
350	2.041	34.457	27.556	54.0	0.269	350	2.026	34.447	27.549	54.7	0.272	350	2.026	34.447	27.549	54.7	0.272
400	2.083	34.488	27.577	52.0	0.297	400	2.058	34.489	27.580	51.7	0.300	400	2.058	34.489	27.580	51.7	0.300
450	2.101	34.531	27.610	48.9	0.323	450	2.178	34.537	27.609	49.0	0.326	450	2.178	34.537	27.609	49.0	0.326
500	2.151	34.567	27.635	46.5	0.348	500	2.082	34.552	27.629	47.1	0.351	500	2.082	34.552	27.629	47.1	0.351
550	2.146	34.586	27.651	45.1	0.372	550	2.106	34.576	27.646	45.5	0.376	550	2.106	34.576	27.646	45.5	0.376
600	2.167	34.603	27.662	43.9	0.396	600	2.103	34.602	27.667	43.5	0.399	600	2.103	34.602	27.667	43.5	0.399
650	2.160	34.624	27.680	42.3	0.419	650	2.111	34.623	27.683	42.0	0.422	650	2.111	34.623	27.683	42.0	0.422
700	2.041	34.631	27.695	40.9	0.442	700	2.080	34.638	27.697	40.6	0.445	700	2.080	34.638	27.697	40.6	0.445
750	2.071	34.656	27.713	39.2	0.463	750	2.047	34.649	27.709	39.5	0.466	750	2.047	34.649	27.709	39.5	0.466
800	2.042	34.665	27.722	38.3	0.485	800	2.155	34.671	27.718	38.7	0.488	800	2.155	34.671	27.718	38.7	0.488
850	1.990	34.675	27.734	37.1	0.505	850	2.078	34.681	27.732	37.4	0.509	850	2.078	34.681	27.732	37.4	0.509
900	1.959	34.685	27.745	36.2	0.526	900	1.943	34.680	27.742	36.4	0.529	900	1.943	34.680	27.742	36.4	0.529
950	1.901	34.687	27.751	35.6	0.546	950	1.953	34.696	27.754	35.3	0.549	950	1.953	34.696	27.754	35.3	0.549
1000	1.833	34.691	27.759	34.8	0.565	1000	1.888	34.696	27.759	34.8	0.569	1000	1.888	34.696	27.759	34.8	0.569
1025	1.810	34.692	27.762	34.5	0.575	1100	1.961	34.728	27.779	32.9	0.608	1100	1.961	34.728	27.779	32.9	0.608
						1200	1.915	34.742	27.794	31.5	0.645	1200	1.915	34.742	27.794	31.5	0.645
						1300	1.737	34.733	27.800	30.9	0.682	1300	1.737	34.733	27.800	30.9	0.682
						1400	1.631	34.729	27.805	30.4	0.718	1400	1.631	34.729	27.805	30.4	0.718
						1500	1.628	34.743	27.816	29.4	0.753	1500	1.628	34.743	27.816	29.4	0.753
						1600	1.502	34.734	27.818	29.2	0.788	1600	1.502	34.734	27.818	29.2	0.788
						1700	1.391	34.729	27.822	28.8	0.822	1700	1.391	34.729	27.822	28.8	0.822
						1800	1.227	34.717	27.824	28.6	0.856	1800	1.227	34.717	27.824	28.6	0.856
						1900	1.100	34.711	27.828	28.3	0.889	1900	1.100	34.711	27.828	28.3	0.889
						2000	0.995	34.705	27.830	28.0	0.921	2000	0.995	34.705	27.830	28.0	0.921
						2100	0.906	34.699	27.831	28.0	0.954	2100	0.906	34.699	27.831	28.0	0.954
						2200	0.817	34.696	27.834	27.6	0.985	2200	0.817	34.696	27.834	27.6	0.985
						2300	0.754	34.693	27.836	27.5	1.016	2300	0.754	34.693	27.836	27.5	1.016
						2400	0.674	34.690	27.839	27.3	1.047	2400	0.674	34.690	27.839	27.3	1.047
						2500	0.585	34.685	27.840	27.1	1.077	2500	0.585	34.685	27.840	27.1	1.077
						2600	0.535	34.683	27.841	27.0	1.106	2600	0.535	34.683	27.841	27.0	1.106
						2700	0.492	34.681	27.842	26.9	1.135	2700	0.492	34.681	27.842	26.9	1.135
						2800	0.423	34.678	27.844	26.8	1.164	2800	0.423	34.678	27.844	26.8	1.164
						2900	0.373	34.676	27.845	26.6	1.192	2900	0.373	34.676	27.845	26.6	1.192
						3000	0.335	34.673	27.845	26.7	1.220	3000	0.335	34.673	27.845	26.7	1.220
						3100	0.298	34.672	27.846	26.5	1.248	3100	0.298	34.672	27.846	26.5	1.248
						3200	0.260	34.671	27.848	26.4	1.275	3200	0.260	34.671	27.848	26.4	1.275
						3300	0.234	34.670	27.848	26.4	1.302	3300	0.234	34.670	27.848	26.4	1.302
						3400	0.212	34.669	27.849	26.3	1.328	3400	0.212	34.669	27.849	26.3	1.328
						3500	0.183	34.668	27.849	26.2	1.354	3500	0.183	34.668	27.849	26.2	1.354
						3600	0.169	34.668	27.850	26.2	1.381	3600	0.169	34.668	27.850	26.2	1.381
						3700	0.130	34.664	27.849	26.3	1.406	3700	0.130	34.664	27.849	26.3	1.406
						3800	0.115	34.665	27.851	26.1	1.432	3800	0.115	34.665	27.851	26.1	1.432
						3900	0.098	34.664	27.851	26.1	1.457	3900	0.098	34.664	27.851	26.1	1.457
						4000	0.068	34.663	27.851	26.0	1.482	4000	0.068	34.663	27.851	26.0	1.482
						4100	0.032	34.661	27.852	26.0	1.507	4100	0.032	34.661	27.852	26.0	1.507
						4200	-0.029	34.661	27.855	25.7	1.531	4200	-0.029	34.661	27.855	25.7	1.531
						4300	-0.085	34.659	27.856	25.6	1.554	4300	-0.085	34.659	27.856	25.6	1.554
						4400	-0.134	34.658	27.858	25.4	1.576	4400	-0.134	34.658	27.858	25.4	1.576
						4500	-0.185	34.656	27.859	25.3	1.597	4500	-0.185	34.656	27.859	25.3	1.597
						4600	-0.319	34.653	27.863	25.0	1.618	4600	-0.319	34.653	27.863	25.0	1.618
						4700	-0.358	34.652	27.864	24.9	1.647	4700	-0.358	34.652	27.864	24.9	1.647
						4732	-0.354	34.651	27.863	25.0	1.643	4732	-0.354	34.651	27.863	25.0	1.643

HY MELVILLE

INDOMEDU LEE XIII

44

LATITUDE 52 01.15		LONGITUDE 29 05.6W		MO/DAY/YR 12/ 9/78		MESSENGER 0234 0531		TIME GMT		BOTTOM 2868M		WIND 040		SPEED 25KT		WEATHER 5		DOMINANT WAVES	
Z	T	S	02	P04	S103	N02	N03	UT	Z	T	S	02	S10T	DT	DU				
1	1.67	33.993	8.05	1.49	20.	0.27	23.5	86.5	0	1.67	33.993	8.05	27.213	86.5	0.000				
26	1.65	33.994	8.02	1.51	20.	0.26	23.8	86.3	10	1.66	33.995	8.04	27.214	86.5	0.009				
53	1.57	34.000	8.08	1.54	21.	0.26	23.8	85.3	20	1.63	33.995	8.03	27.215	86.4	0.017				
78	1.41	34.012	8.04	1.56	23.	0.26	24.3	83.4	30	1.64	33.996	8.03	27.216	86.2	0.026				
104	0.88	34.039	7.92	1.81	35.	0.25	26.5	78.0	50	1.58	34.000	8.07	27.224	85.5	0.043				
124	0.19	34.088	7.80	2.08	50.	0.23	29.1	70.5	75	1.44	34.011	8.04	27.243	83.7	0.064				
145	0.27	34.193	6.95	2.20	61.	0.14	32.3	62.9	100	0.99	34.034	7.94	27.292	79.1	0.085				
165	0.17	34.218	6.81	2.23	64.	0.12	32.5	60.5	125	0.19	34.095	7.76	27.387	70.1	0.103				
195	1.08	34.363	5.43	2.34	70.	0.05	34.5	54.6	150	0.23	34.201	6.91	27.471	62.1	0.120				
236	1.42	34.455	4.87	2.38	76.	0.03	35.1	49.8	200	1.13	34.379	5.31	27.558	55.8	0.149				
287	1.62	34.524	4.50	2.38	81.	0.02	35.2	45.9	250	1.49	34.478	4.74	27.614	48.6	0.175				
357	1.68	34.584	4.44	2.36	86.	0.01	34.7	41.8	300	1.64	34.538	4.49	27.651	45.1	0.199				
439	1.770	34.635	4.26	2.33	88.	0.02	34.3	38.6	400	1.73	34.615	4.34	27.705	39.9	0.243				
519	1.742	34.663	4.33	2.30	92.	0.01	33.8	36.2	500	1.75	34.657	4.31	27.738	36.8	0.283				
594A	1.55	34.681	4.30	2.25	94.	0.01	34.0	33.5	600	1.55	34.683	4.30	27.773	33.4	0.320				
715	1.574	34.698	4.42	2.26	98.	0.01	32.9	32.4	700	1.57	34.698	4.40	27.784	32.4	0.355				
794A	1.54	34.706	4.43	2.25	98.	0.01	33.4	31.6	800	1.53	34.707	4.44	27.794	31.5	0.390				
894A	1.39	34.706	4.150	2.24	103.	0.01	33.4	30.5	1000	1.34	34.715	4.67	27.814	29.5	0.457				
994A	1.35	34.715	4.67	2.23	105.	0.01	33.1	29.6	1200	1.12	34.712	4.68	27.826	28.4	0.521				
1145A	1.17	34.711	4.66	2.23	109.	0.01	33.2	28.7	1500	0.89	34.711	4.74	27.841	26.9	0.613				
1295A	1.05	34.712	4.71	2.23	113.	0.00	33.0	27.9	1750	0.58	34.690	4.94	27.843	26.8	0.686				
1445A	0.932	34.712	4.73	2.22	115.	0.01	33.0	27.1	2000	0.46	34.688	4.94	27.849	26.2	0.756				
1594A	0.795	34.706	4.78	2.25	118.	0.01	33.1	26.8	2250	0.32	34.682	5.04	27.852	26.0	0.824				
1744A	0.585	34.689	4.94	2.27	121.	0.00	33.5	26.8	2500	0.18	34.675	5.16	27.854	25.8	0.890				
1896A	0.553	34.692	4.95	2.28	121.	0.01	33.4	26.4	2750	0.08	34.670	5.22	27.856	25.6	0.953				
2047A	0.412	34.685	4.94	2.29	123.	0.01	33.6	26.2											
2196A	0.346	34.682	5.02	2.29	125.	0.01	33.6	26.0											
2348A	0.271	34.679	5.07	2.30	126.	0.01	33.6	25.9											
2499A	0.182	34.674	5.16	2.30	127.	0.01	33.6	25.8											
2649A	0.113	34.671	5.23	2.28	127.	0.02	33.6	25.7											
2800A	0.060	34.668	5.22	2.28	130.	0.02	33.5	25.6											

44 S

INDOMED LEG XIII CTD

44 D

LATITUDE	LONGITUDE	MO/DAY/YR	START TIME				LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			
52 01.9S	29 45.0W	12/09/78	0449 GMT				52 01.0S	29 45.3W	12/09/78	0124 GMT			
Z	T	S	SIGMA T	DT	DD		Z	T	S	SIGMA T	DT	DD	
0	1.689	33.989	27.209	87.0	0.000		0	1.771	33.992	27.205	87.3	0.000	
10	1.664	33.994	27.214	86.4	0.009		10	1.754	33.991	27.205	87.3	0.009	
20	1.661	33.995	27.215	86.3	0.017		20	1.742	33.993	27.208	87.0	0.017	
30	1.646	33.997	27.218	86.1	0.026		30	1.590	33.996	27.221	85.8	0.026	
40	1.554	34.004	27.230	84.9	0.035		40	1.568	34.003	27.228	85.1	0.035	
50	1.526	34.007	27.235	84.5	0.043		50	1.518	34.007	27.235	84.4	0.043	
75	1.364	34.018	27.255	82.6	0.064		75	1.405	34.014	27.249	83.2	0.064	
100	0.797	34.047	27.315	76.9	0.084		100	0.950	34.022	27.285	79.7	0.085	
125	0.167	34.125	27.413	67.6	0.102		125	0.557	34.068	27.346	73.9	0.104	
150	0.198	34.212	27.482	61.1	0.118		150	0.383	34.173	27.440	65.0	0.121	
175	0.449	34.282	27.524	57.1	0.133		175	0.371	34.260	27.511	58.3	0.137	
200	1.116	34.374	27.557	54.0	0.147		200	0.952	34.347	27.546	55.0	0.151	
225	1.368	34.440	27.592	50.6	0.160		225	1.323	34.429	27.587	51.1	0.164	
250	1.539	34.484	27.615	48.4	0.172		250	1.558	34.488	27.617	48.2	0.177	
275	1.590	34.508	27.631	46.9	0.185		275	1.633	34.513	27.632	46.8	0.189	
300	1.632	34.535	27.649	45.2	0.196		300	1.637	34.534	27.648	45.3	0.201	
350	1.687	34.583	27.684	41.9	0.219		350	1.684	34.588	27.688	41.5	0.223	
400	1.784	34.624	27.709	39.5	0.240		400	1.684	34.618	27.712	39.2	0.244	
450	1.768	34.640	27.723	38.2	0.260		450	1.698	34.644	27.732	37.4	0.264	
500	1.718	34.654	27.738	36.8	0.280		500	1.681	34.658	27.744	36.2	0.283	
550	1.738	34.671	27.750	35.6	0.299		550	1.691	34.672	27.755	35.2	0.302	
600	1.682	34.680	27.762	34.5	0.318		600	1.664	34.685	27.767	34.0	0.320	
650	1.671	34.691	27.771	33.6	0.336		650	1.649	34.695	27.776	33.2	0.338	
700	1.590	34.697	27.782	32.6	0.354		700	1.592	34.696	27.781	32.7	0.356	
718	1.576	34.698	27.784	32.4	0.360		750	1.608	34.705	27.787	32.1	0.374	
							800	1.552	34.708	27.794	31.5	0.391	
							850	1.428	34.705	27.800	30.9	0.408	
							900	1.433	34.714	27.807	30.2	0.423	
							950	1.403	34.716	27.811	29.9	0.441	
							1000	1.348	34.716	27.815	29.5	0.458	
							1100	1.212	34.712	27.821	28.9	0.490	
							1200	1.078	34.709	27.828	28.3	0.521	
							1300	1.013	34.708	27.831	27.9	0.552	
							1400	0.972	34.712	27.837	27.4	0.583	
							1500	0.859	34.706	27.840	27.1	0.613	
							1600	0.778	34.703	27.842	26.9	0.642	
							1700	0.692	34.700	27.846	26.6	0.672	
							1800	0.569	34.688	27.843	26.8	0.700	
							1900	0.547	34.691	27.847	26.5	0.729	
							2000	0.438	34.685	27.849	26.3	0.757	
							2100	0.384	34.683	27.850	26.2	0.784	
							2200	0.344	34.681	27.851	26.1	0.811	
							2300	0.294	34.678	27.851	26.1	0.838	
							2400	0.242	34.678	27.854	25.8	0.865	
							2500	0.177	34.673	27.854	25.8	0.891	
							2600	0.155	34.672	27.854	25.8	0.916	
							2700	0.100	34.669	27.855	25.7	0.942	
							2800	0.064	34.669	27.857	25.6	0.966	
							2845	0.068	34.668	27.855	25.7	0.978	

HV MELVILLE

INCOMED L&W XIII

45

LATITUDE 48 44.85		LONGITUDE 36 00.0W	MO/DAY/YR 12/11/78		MESSNGR 0230 0649		TIME GRT	BOTTOM 5386M	WIND 240	SPEED 32KT	WEATHER 1	DOMINANT WAVES 240 7 7			
Z	T	S	O2	PO4	SI03	NO2	NO3	DT	Z	I	S	O2	SI01	DT	DD
1	5.08	34.026	7.31	1.41	4.	0.21	19.9	114.6	0	5.08	34.026	7.31	26.917	114.6	0.000
62	5.06	34.027	7.32	1.43	4.	0.21	20.2	114.3	10	5.08	34.027	7.31	26.917	114.6	0.011
92	4.21	34.130	6.86	1.71	9.	0.08	24.5	97.7	20	5.07	34.028	7.31	26.918	114.5	0.023
122	4.04	34.136	6.92	1.73	10.	0.03	24.7	95.6	30	5.07	34.028	7.31	26.919	114.5	0.034
153	3.95	34.140	6.85	1.72	11.	0.05	24.9	94.4	50	5.06	34.028	7.32	26.920	114.4	0.057
193	3.64	34.138	6.89	1.79	13.	0.03	25.5	91.6	75	4.68	34.073	7.11	26.998	106.9	0.085
224	3.35	34.123	6.99	1.81	12.	0.03	25.9	90.1	100	4.16	34.133	6.88	27.181	97.1	0.111
266	3.42	34.153	6.60	1.87	17.	0.02	27.3	88.4	125	4.03	34.138	6.91	27.119	95.4	0.135
306	3.24	34.156	6.46	1.94	20.	0.02	27.8	86.6	150	3.96	34.141	6.86	27.129	94.5	0.159
357	3.01	34.157	6.39	1.98	22.	0.02	28.7	84.5	200	3.56	34.135	6.92	27.164	91.2	0.206
418	2.76	34.166	6.17	2.07	27.	0.01	29.9	81.7	250	3.38	34.141	6.77	27.187	89.0	0.252
485	2.52	34.196	5.89	2.17	33.	0.01	31.3	77.5	300	3.27	34.158	6.47	27.210	86.9	0.297
562	2.50	34.242	5.50	2.25	40.	0.01	32.3	73.9	400	2.83	34.163	6.24	27.254	82.6	0.384
638	2.53	34.295	5.13	2.33	46.	0.01	33.4	70.1	500	2.52	34.206	5.82	27.316	76.7	0.467
714	2.48	34.345	4.83	2.37	54.	0.01	34.4	65.9	600	2.52	34.269	5.31	27.366	72.0	0.544
790	2.64	34.430	4.42	2.41	60.	0.01	34.9	60.8	700	2.48	34.335	4.89	27.422	66.7	0.617
865	2.59	34.465	4.29	2.44	65.	0.01	35.1	57.7	800	2.63	34.435	4.39	27.489	60.3	0.684
940	2.50	34.497	4.18	2.44	69.	0.01	35.3	54.6	1000	2.47	34.535	4.11	27.583	51.5	0.807
1014	2.46	34.540	4.10	2.45	73.	0.01	35.1	51.0	1200	2.36	34.612	4.04	27.653	44.8	0.915
1056A	2.52	34.542	4.12	2.34	71.	0.01	34.4	51.3	1500	2.45	34.728	4.36	27.739	36.7	1.060
1209	2.34	34.617	4.03	2.44	81.	0.01	34.6	44.2	1750	2.27	34.746	4.47	27.768	33.9	1.170
1247A	2.32	34.630	4.02	2.39	84.	0.00	34.6	43.1	2000	2.23	34.780	4.72	27.799	31.1	1.276
1343A	2.31	34.667	4.14	2.32	84.	0.00	33.7	40.2	2250	1.79	34.744	4.50	27.804	30.6	1.378
1440A	2.25	34.680	4.04	2.18	86.	0.01	33.5	38.8	2500	1.58	34.749	4.73	27.824	28.6	1.474
1535A	2.56	34.755	4.55	2.07	71.	0.00	30.3	35.6	2750	1.28	34.727	4.68	27.828	28.3	1.565
1678A	2.227	34.725	4.35	2.19	85.	0.00	32.0	35.2	3000	1.04	34.716	4.78	27.836	27.5	1.653
1822A	2.347	34.771	4.63	2.06	77.	0.00	30.1	32.6	3250	0.77	34.698	4.86	27.838	27.3	1.735
1967A	2.241	34.776	4.69	2.05	79.	0.00	29.6	31.4	3500	0.58	34.689	4.92	27.843	26.8	1.813
2110A	2.180	34.784	4.76	1.99	78.	0.00	29.2	30.3	3750	0.40	34.681	5.05	27.847	26.4	1.886
2301A	1.643	34.728	4.42	2.20	104.	0.01	32.4	30.6	4000	0.28	34.674	5.12	27.848	26.3	1.956
2493A	1.587	34.749	4.73	2.13	98.	0.00	31.1	28.6	4250	0.23	34.674	5.16	27.851	26.1	2.023
2686A	1.337	34.724	4.65	2.21	102.	0.00	32.4	28.8	4500	0.18	34.670	5.20	27.850	26.1	2.088
2878A	1.175	34.731	4.76	2.22	112.	0.01	32.1	27.2	4750	0.17	34.667	5.20	27.849	26.3	2.153
3071A	0.952	34.706	4.79	2.28	119.	0.00	32.8	27.7	5000	0.08	34.663	5.34	27.851	26.1	2.217
3312A	0.720	34.695	4.88	2.31	123.	0.00	33.0	27.1	5250	0.03	34.651	5.35	27.844	26.7	2.278
3555A	0.540	34.687	4.94	2.31	126.	0.00	33.3	26.7							
3796A	0.371	34.679	5.07	2.35	129.	0.00	33.5	26.4							
4040A	0.270	34.673	5.13	2.36	130.	0.00	33.5	26.3							
4284A	0.220	34.673	5.16	2.33	131.	0.01	33.5	26.0							
4530A	0.181	34.669	5.21	2.36	131.	0.00	33.5	26.2							
4777A	0.172	34.666	5.20	2.35	131.	0.00	33.1	26.3							
5026A	0.064	34.662	5.36	2.35	130.	0.00	33.4	26.1							
5224A	0.030	34.652	5.35	2.30	127.	0.01	33.2	26.7							

45 S						INDOONEC LEG XIII CTD						45 D					
LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME			LATITUDE	LONGITUDE	MO/DAY/YR	START TIME		
48 42.7S	36 08.7W	12/11/76	0609 GMT			48 45.8S	36 10.2W	12/11/78	0020 GMT			48 45.8S	36 10.2W	12/11/78	0020 GMT		
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD
0	5.092	34.020	26.911	115.2	0.000	0	5.217	34.026	26.901	116.1	0.000	0	5.217	34.026	26.901	116.1	0.000
10	5.087	34.022	26.913	115.0	0.012	10	5.218	34.026	26.901	116.1	0.012	10	5.218	34.026	26.901	116.1	0.012
20	5.088	34.021	26.912	115.1	0.023	20	5.222	34.029	26.903	116.0	0.023	20	5.222	34.029	26.903	116.0	0.023
30	5.087	34.021	26.912	115.1	0.035	30	5.228	34.031	26.904	115.9	0.035	30	5.228	34.031	26.904	115.9	0.035
40	5.080	34.022	26.914	114.9	0.046	40	5.231	34.031	26.903	115.9	0.046	40	5.231	34.031	26.903	115.9	0.046
50	5.081	34.022	26.914	114.9	0.058	50	5.232	34.032	26.904	115.8	0.058	50	5.232	34.032	26.904	115.8	0.058
75	4.303	34.119	27.077	99.4	0.085	75	5.068	34.042	26.929	113.5	0.087	75	5.068	34.042	26.929	113.5	0.087
100	4.106	34.143	27.109	96.4	0.109	100	4.226	34.130	27.094	97.8	0.114	100	4.226	34.130	27.094	97.8	0.114
125	4.007	34.147	27.122	95.2	0.133	125	4.102	34.134	27.110	96.3	0.138	125	4.102	34.134	27.110	96.3	0.138
150	3.915	34.137	27.132	94.3	0.157	150	3.969	34.135	27.124	94.9	0.162	150	3.969	34.135	27.124	94.9	0.162
175	3.655	34.135	27.156	91.9	0.181	175	3.720	34.128	27.144	93.1	0.186	175	3.720	34.128	27.144	93.1	0.186
200	3.411	34.122	27.169	90.7	0.204	200	3.553	34.136	27.167	90.9	0.210	200	3.553	34.136	27.167	90.9	0.210
225	3.473	34.148	27.184	89.3	0.227	225	3.492	34.145	27.180	89.7	0.233	225	3.492	34.145	27.180	89.7	0.233
250	3.596	34.151	27.194	88.4	0.250	250	3.438	34.152	27.191	88.7	0.255	250	3.438	34.152	27.191	88.7	0.255
275	3.265	34.148	27.204	87.4	0.272	275	3.312	34.152	27.203	87.5	0.278	275	3.312	34.152	27.203	87.5	0.278
300	3.135	34.149	27.217	86.2	0.294	300	3.208	34.154	27.214	86.5	0.300	300	3.208	34.154	27.214	86.5	0.300
350	2.991	34.156	27.235	84.4	0.338	350	2.978	34.164	27.243	83.7	0.344	350	2.978	34.164	27.243	83.7	0.344
400	2.810	34.167	27.260	82.1	0.381	400	2.557	34.151	27.269	81.2	0.386	400	2.557	34.151	27.269	81.2	0.386
450	2.463	34.172	27.294	78.9	0.422	450	2.489	34.181	27.299	78.4	0.427	450	2.489	34.181	27.299	78.4	0.427
500	2.361	34.203	27.327	75.7	0.462	500	2.413	34.216	27.333	75.1	0.467	500	2.413	34.216	27.333	75.1	0.467
550	2.678	34.272	27.355	73.0	0.501	550	2.700	34.279	27.359	72.7	0.505	550	2.700	34.279	27.359	72.7	0.505
600	2.666	34.296	27.376	71.1	0.539	600	2.499	34.295	27.389	69.8	0.542	600	2.499	34.295	27.389	69.8	0.542
650	2.446	34.309	27.405	68.4	0.575	650	2.517	34.339	27.423	66.7	0.578	650	2.517	34.339	27.423	66.7	0.578
700	2.490	34.343	27.428	66.1	0.611	700	2.494	34.368	27.448	64.3	0.613	700	2.494	34.368	27.448	64.3	0.613
750	2.497	34.386	27.462	62.9	0.645	750	2.642	34.428	27.483	61.0	0.646	750	2.642	34.428	27.483	61.0	0.646
800	2.612	34.435	27.491	60.2	0.678	800	2.571	34.444	27.502	59.2	0.678	800	2.571	34.444	27.502	59.2	0.678
850	2.579	34.455	27.510	58.4	0.710	850	2.654	34.482	27.525	57.0	0.710	850	2.654	34.482	27.525	57.0	0.710
900	2.623	34.487	27.532	56.3	0.741	900	2.553	34.500	27.548	54.8	0.740	900	2.553	34.500	27.548	54.8	0.740
950	2.485	34.492	27.548	54.8	0.771	950	2.454	34.503	27.559	53.8	0.770	950	2.454	34.503	27.559	53.8	0.770
1000	2.460	34.527	27.577	52.0	0.801	1000	2.460	34.532	27.581	51.6	0.799	1000	2.460	34.532	27.581	51.6	0.799
1100	2.523	34.586	27.619	48.0	0.857	1100	2.420	34.571	27.616	48.3	0.855	1100	2.420	34.571	27.616	48.3	0.855
1200	2.367	34.602	27.645	45.6	0.910	1200	2.346	34.607	27.651	45.0	0.908	1200	2.346	34.607	27.651	45.0	0.908
1225	2.348	34.608	27.652	45.0	0.923	1300	2.330	34.643	27.681	42.2	0.938	1300	2.330	34.643	27.681	42.2	0.938
						1400	2.349	34.684	27.712	39.2	1.006	1400	2.349	34.684	27.712	39.2	1.006
						1500	2.445	34.719	27.732	37.3	1.052	1500	2.445	34.719	27.732	37.3	1.052
						1600	2.627	34.774	27.760	34.7	1.098	1600	2.627	34.774	27.760	34.7	1.098
						1700	2.195	34.725	27.758	34.9	1.142	1700	2.195	34.725	27.758	34.9	1.142
						1800	2.309	34.764	27.779	32.9	1.185	1800	2.309	34.764	27.779	32.9	1.185
						1900	2.341	34.780	27.789	31.9	1.227	1900	2.341	34.780	27.789	31.9	1.227
						2000	2.349	34.799	27.804	30.5	1.269	2000	2.349	34.799	27.804	30.5	1.269
						2100	2.222	34.791	27.808	30.1	1.310	2100	2.222	34.791	27.808	30.1	1.310
						2200	1.784	34.729	27.793	31.5	1.351	2200	1.784	34.729	27.793	31.5	1.351
						2300	1.715	34.740	27.807	30.2	1.391	2300	1.715	34.740	27.807	30.2	1.391
						2400	1.715	34.752	27.817	29.3	1.429	2400	1.715	34.752	27.817	29.3	1.429
						2500	1.529	34.736	27.818	29.2	1.468	2500	1.529	34.736	27.818	29.2	1.468
						2600	1.389	34.727	27.821	28.9	1.505	2600	1.389	34.727	27.821	28.9	1.505
						2700	1.343	34.727	27.824	28.6	1.541	2700	1.343	34.727	27.824	28.6	1.541
						2800	1.246	34.725	27.829	28.1	1.577	2800	1.246	34.725	27.829	28.1	1.577
						2900	1.170	34.725	27.835	27.6	1.613	2900	1.170	34.725	27.835	27.6	1.613
						3000	1.061	34.717	27.835	27.5	1.647	3000	1.061	34.717	27.835	27.5	1.647
						3100	0.916	34.705	27.835	27.6	1.681	3100	0.916	34.705	27.835	27.6	1.681
						3200	0.872	34.706	27.839	27.2	1.714	3200	0.872	34.706	27.839	27.2	1.714
						3300	0.757	34.700	27.841	27.0	1.746	3300	0.757	34.700	27.841	27.0	1.746
						3400	0.674	34.695	27.843	26.9	1.777	3400	0.674	34.695	27.843	26.9	1.777
						3500	0.579	34.689	27.844	26.8	1.808	3500	0.579	34.689	27.844	26.8	1.808
						3600	0.508	34.684	27.844	26.8	1.838	3600	0.508	34.684	27.844	26.8	1.838
						3700	0.425	34.681	27.846	26.5	1.867	3700	0.425	34.681	27.846	26.5	1.867
						3800	0.366	34.681	27.850	26.2	1.895	3800	0.366	34.681	27.850	26.2	1.895
						3900	0.319	34.677	27.849	26.3	1.923	3900	0.319	34.677	27.849	26.3	1.923
						4000	0.306	34.678	27.851	26.1	1.950	4000	0.306	34.678	27.851	26.1	1.950
						4100	0.251	34.674	27.850	26.1	1.977	4100	0.251	34.674	27.850	26.1	1.977
						4200	0.217	34.673	27.852	26.0	2.004	4200	0.217	34.673	27.852	26.0	2.004
						4300	0.198	34.671	27.851	26.1	2.030	4300	0.198	34.671	27.851	26.1	2.030
						4400	0.186	34.671	27.852	26.0	2.056	4400	0.186	34.671	27.852	26.0	2.056
						4500	0.180	34.671	27.852	26.0	2.082	4500	0.180	34.671	27.852	26.0	2.082
						4600	0.169	34.670	27.852	26.0	2.108	4600	0.169	34.670	27.852	26.0	2.108
						4700	0.164	34.668	27.850	26.1	2.133	4700	0.164	34.668	27.850	26.1	2.133
						4800	0.164	34.667	27.850	26.2	2.159	4800	0.164	34.667	27.850	26.2	2.159
						4900	0.120	34.665	27.850	26.1	2.185	4900	0.120	34.665	27.850	26.1	2.185
						5000	0.071	34.662	27.851	26.1	2.210	5000	0.071	34.662	27.851	26.1	2.210
						5100	0.054	34.660	27.850	26.2	2.234	5100	0.054	34.660	27.850	26.2	2.234
						5200	0.020	34.657	27.849	26.3	2.259						

NV MELVILLE

INDOMED L&G XIII

46

LATITUDE 48 36.05		LONGITUDE 39 05.1W		MO/DAY/YR 12/12/78		MESSENGER 1411 1750		TIME GMT	BOTTOM 5407M	MINU 250	SPEED 30KT	WEATHER 2	DOMINANT WAVES 250 8 7		
Z	T	S	U2	P04	S103	N02	N03	DT	Z	T	S	O2	S10T	DT	DD
1	3.18	33.838		1.32	1.	0.19	19.7	110.1	0	3.18	33.838		26.965	110.1	0.000
21	3.18	33.837	8.14	1.34	1.	0.20	19.9	110.1	10	3.18	33.839		26.965	110.1	0.011
47	3.18	33.837	7.97	1.35	1.	0.19	19.9	110.1	20	3.18	33.838		26.964	110.1	0.022
73	3.09	33.852	7.91	1.37	2.	0.20	20.2	108.2	30	3.18	33.838	8.07	26.964	110.1	0.033
99	2.55	33.920	7.71	1.66	12.	0.19	23.8	98.6	56	3.17	33.840	7.96	26.967	109.9	0.055
129	1.98	33.952	7.64	1.80	16.	0.16	25.9	91.9	75	3.06	33.858	7.89	26.991	107.6	0.082
165	1.63	33.984	7.46	1.86	18.	0.10	27.3	87.0	100	2.53	33.923	7.71	27.089	98.3	0.108
206	1.83	34.052	7.00	1.94	22.	0.02	28.5	83.2	125	2.05	33.951	7.65	27.150	92.5	0.132
257	1.83	34.105	6.56	2.05	28.	0.01	30.3	79.2	150	1.72	33.971	7.55	27.191	88.7	0.155
307	1.76	34.143	6.32	2.12	33.	0.00	31.5	75.8	200	1.79	34.043	7.07	27.243	83.7	0.198
358	1.90	34.196	5.85	2.19	39.	0.00	32.6	72.8	250	1.83	34.099	6.61	27.285	79.7	0.240
408	2.07	34.253	5.39	2.24	45.	0.00	33.7	69.7	300	1.77	34.139	6.35	27.322	76.2	0.279
459	2.154		5.12	2.24	45.	0.01	33.2		400	2.04	34.245	5.46	27.386	70.2	0.354
510	2.244	34.329	4.87	2.35	54.	0.01	34.9	65.3	500	2.23	34.323	4.91	27.433	65.7	0.424
560	2.162	34.320 U	4.74	2.34	59.	0.00	34.8		600	2.25	34.396	4.59	27.490	60.3	0.489
610	2.276	34.406	4.55	2.41	63.	0.04	35.6	59.7	700	2.34	34.485	4.25	27.554	54.2	0.550
661	2.357	34.450	4.37	2.43	67.	0.00	35.9	57.0	800	2.29	34.529	4.11	27.593	50.6	0.606
735A	2.30	34.511	4.12	2.37	73.	0.00	36.0	51.9	1000	2.24	34.604	4.02	27.656	44.5	0.710
836	2.287	34.533	4.10	2.43	76.	0.00	36.1	50.2	1200	2.13	34.652	3.80	27.704	40.1	0.806
939A	2.26	34.582	4.03	2.39	81.	0.01	35.7	46.2	1500	1.93	34.693	4.14	27.753	35.3	0.938
1091A	2.20	34.626	4.01	2.36	86.	0.00	35.4	42.5	1750	1.79	34.713	4.20	27.779	32.8	1.040
1244A	2.10	34.659	3.99	2.18U	89.	0.01	34.7	39.2	2000	1.60	34.717	4.41	27.797	31.1	1.138
1447A	1.96	34.688	4.14	2.28	94.	0.00	34.2	35.9	2250	1.41	34.719	4.54	27.813	29.7	1.232
1650A	1.85	34.706	4.15	2.19	99.	0.00	33.9	33.8	2500	1.23	34.719	4.59	27.825	28.5	1.322
1852A	1.73	34.719	4.28	2.23	102.	0.00	33.7	31.9	2750	1.02	34.710	4.75	27.832	27.9	1.407
2054A	1.55	34.716	4.45	2.21	105.	0.00	33.4	30.9	3000	0.90	34.710	4.78	27.840	27.1	1.490
2256A	1.41	34.719	4.54	2.21	109.	0.00	33.4	29.7	3250	0.70	34.699	4.94	27.844	26.7	1.569
2457A	1.27	34.720	4.55	2.20	114.	0.00	33.4	28.7	3500	0.52	34.691	5.02	27.848	26.4	1.645
2647A	1.10	34.715	4.74	2.19	116.	0.01	33.4	28.0	3750	0.39	34.687	5.09	27.853	25.9	1.716
2848A	0.956	34.706	4.76	2.19	119.	0.01	33.7	27.7	4000	0.27	34.678	5.14	27.853	25.9	1.784
3047A	0.879	34.711	4.79	2.21	120.	0.01	33.4	26.9	4250	0.24	34.676	5.19	27.852	26.0	1.851
3247A	0.705	34.699	4.94	2.24	123.	0.00	33.7	26.8	4500	0.19	34.674	5.23	27.853	25.9	1.916
3449A	0.527	34.690	5.02	2.25	126.	0.00	34.0	26.4	4750	0.16	34.672	5.19	27.852	26.0	1.981
3741A	0.396	34.687	5.09	2.25	129.	0.01	34.2	25.9	5000	0.18	34.670	5.29	27.850	26.1	2.046
3987A	0.268	34.678	5.14	2.29	131.	0.00	34.1	25.9	5250	0.16	34.666	5.32	27.848	26.3	2.111
4233A	0.240	34.675	5.18	2.30	131.	0.00	33.5	26.0							
4478A	0.194	34.673	5.24	2.29	131.	0.01	34.0	25.9							
4721A	0.164	34.671	5.18	2.28	132.	0.00	34.1	26.0							
4963A	0.180	34.669	5.28	2.28	132.	0.00	34.2	26.2							
5156A	0.175	34.669	5.31	2.29	131.	0.00	34.2	26.1							
5500A	0.157	34.663	5.32	2.27	130.	0.02	34.1	26.5							

46 S						INDOMED LEG XIII CTD						46 D					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			
48 36.0S		39 01.3W		12/12/78		1657 GMT		48 36.2S		39 04.4W		12/12/78		1221 GMT			
Z	T	S	SIGMA T	DT	DD			Z	T	S	SIGMA T	DT	DD				
0	3.172	33.835	26.963	110.2	0.000			0	3.120	33.833	26.967	109.9	0.000				
10	3.167	33.839	26.967	109.9	0.011			10	3.116	33.835	26.969	109.7	0.011				
20	3.171	33.840	26.966	110.0	0.022			20	3.106	33.835	26.969	109.6	0.022				
30	3.151	33.849	26.969	109.7	0.033			30	3.088	33.836	26.972	109.4	0.033				
40	3.140	33.841	26.971	109.5	0.044			40	3.085	33.837	26.973	109.3	0.044				
50	3.139	33.841	26.971	109.5	0.055			50	3.054	33.839	26.977	108.9	0.055				
75	3.140	33.840	26.970	109.6	0.082			75	2.965	33.849	26.993	107.4	0.082				
100	2.802	33.894	27.044	102.6	0.109			100	2.167	33.881	27.086	98.6	0.108				
125	2.112	33.936	27.134	94.0	0.134			125	1.454	33.907	27.160	91.6	0.132				
150	1.660	33.960	27.187	89.0	0.157			150	1.807	33.999	27.208	87.0	0.154				
175	1.829	34.017	27.221	85.8	0.179			175	1.909	34.046	27.238	84.2	0.176				
200	1.677	34.027	27.240	84.0	0.200			200	1.911	34.072	27.258	82.3	0.197				
225	1.803	34.068	27.263	81.8	0.221			225	2.049	34.107	27.276	80.6	0.217				
250	1.850	34.100	27.285	79.7	0.241			250	1.672	34.088	27.289	79.4	0.247				
275	1.828	34.126	27.308	77.6	0.261			275	1.797	34.138	27.320	76.4	0.257				
300	1.797	34.149	27.329	75.6	0.281			300	1.732	34.147	27.332	75.3	0.276				
350	1.920	34.209	27.367	71.9	0.318			350	1.894	34.197	27.359	72.7	0.314				
400	2.083	34.266	27.400	68.8	0.354			400	1.963	34.240	27.389	69.9	0.350				
450	2.139	34.300	27.423	66.7	0.389			450	2.103	34.294	27.421	66.9	0.385				
500	2.268	34.350	27.452	63.9	0.423			500	2.261	34.346	27.450	64.1	0.419				
550	2.188	34.376	27.479	61.3	0.455			550	2.293	34.387	27.480	61.3	0.452				
600	2.247	34.417	27.507	58.6	0.487			600	2.266	34.421	27.509	58.5	0.483				
650	2.363	34.461	27.533	56.2	0.517			650	2.300	34.450	27.529	56.5	0.514				
700	2.335	34.484	27.554	54.3	0.546			700	2.288	34.478	27.553	54.3	0.543				
750	2.319	34.508	27.574	52.3	0.575			750	2.317	34.507	27.574	52.4	0.572				
800	2.296	34.527	27.591	50.7	0.603			800	2.298	34.530	27.593	50.5	0.599				
847	2.286	34.549	27.610	48.9	0.628			850	2.301	34.546	27.606	49.3	0.626				
								900	2.292	34.565	27.622	47.8	0.653				
								950	2.273	34.585	27.639	46.1	0.679				
								1000	2.266	34.602	27.654	44.8	0.704				
								1100	2.220	34.629	27.679	42.4	0.753				
								1200	2.144	34.645	27.698	40.6	0.800				
								1300	2.089	34.661	27.715	39.0	0.846				
								1400	2.033	34.679	27.734	37.2	0.890				
								1500	1.972	34.693	27.750	35.7	0.934				
								1600	1.906	34.704	27.764	34.3	0.975				
								1700	1.837	34.710	27.774	33.4	1.016				
								1800	1.775	34.715	27.783	32.5	1.056				
								1900	1.665	34.711	27.788	32.1	1.096				
								2000	1.575	34.714	27.797	31.2	1.135				
								2100	1.519	34.719	27.805	30.4	1.173				
								2200	1.435	34.717	27.810	30.0	1.210				
								2300	1.375	34.720	27.816	29.4	1.246				
								2400	1.279	34.717	27.821	29.0	1.282				
								2500	1.234	34.719	27.825	28.5	1.318				
								2600	1.152	34.714	27.827	28.4	1.353				
								2700	1.060	34.709	27.829	28.2	1.387				
								2800	0.963	34.703	27.832	27.9	1.421				
								2900	0.896	34.702	27.834	27.7	1.454				
								3000	0.891	34.709	27.840	27.1	1.487				
								3100	0.806	34.702	27.840	27.1	1.519				
								3200	0.733	34.703	27.845	26.6	1.550				
								3300	0.652	34.699	27.847	26.5	1.581				
								3400	0.566	34.692	27.847	26.5	1.611				
								3500	0.504	34.690	27.849	26.3	1.640				
								3600	0.448	34.689	27.851	26.1	1.669				
								3700	0.390	34.686	27.852	26.0	1.697				
								3800	0.350	34.684	27.853	25.9	1.725				
								3900	0.304	34.681	27.853	25.9	1.752				
								4000	0.257	34.679	27.854	25.8	1.779				
								4100	0.246	34.680	27.855	25.7	1.805				
								4200	0.244	34.677	27.853	25.9	1.831				
								4300	0.221	34.676	27.854	25.8	1.858				
								4400	0.196	34.675	27.854	25.8	1.884				
								4500	0.186	34.672	27.852	26.0	1.909				
								4600	0.182	34.671	27.852	26.0	1.935				
								4700	0.183	34.672	27.853	25.9	1.961				
								4800	0.179	34.671	27.852	26.0	1.987				
								4900	0.177	34.671	27.852	26.0	2.013				
								5000	0.180	34.669	27.850	26.2	2.039				
								5100	0.179	34.668	27.850	26.2	2.065				
								5200	0.168	34.666	27.849	26.3	2.091				
								5300	0.153	34.665	27.849	26.3	2.117				
								5400	0.112	34.663	27.849	26.3	2.142				

RV MELVILLE										INCOMED LEG XIII											
LATITUDE 46 50.0S		LONGITUDE 55 04.6W		MO/DAY/YR 12/16/78		MESSENGER 2113 GMT		TIME		BOTTOM 6054M		WIND 320		SPEED 22KT		WEATHER 1		DOMINANT WAVES 350 5 6			
Z	T	S	O2	P04	SIO3	NO2	NO3	DT	Z	T	S	O2	SIWT	DT	DC						
1	12.16	34.932	6.73	0.49	0.	0.17	4.5	151.8	0	12.16	34.932	6.73	26.524	151.8	0.000						
51	11.65	34.946	6.25	0.54	0.	0.21	5.3	141.6	10	12.04	34.936	6.62	26.550	149.4	0.015						
101	11.52	34.941	6.14	0.61	1.	0.24	5.7	139.6	20	11.92	34.939	6.50	26.576	146.9	0.030						
151	10.34	34.925	5.85	1.00	3.	0.02	12.7	120.5	50	11.82	34.942	6.41	26.598	144.9	0.045						
201	8.75	34.860	5.79	1.17	5.	0.01	16.8	115.0	50	11.66	34.946	6.26	26.631	141.7	0.073						
251	7.02	34.841	5.78	1.53	7.	0.01	21.6	107.0	75	11.59	34.944	6.19	26.642	140.6	0.109						
300	5.56	34.872	6.03	1.68	9.	0.01	24.4	101.6	100	11.52	34.941	6.14	26.652	139.7	0.145						
401	4.46	34.197	6.36	1.80	12.	0.01	26.1	95.2	125	11.04	34.949	6.00	26.747	130.7	0.179						
499	3.95	34.182	6.45	1.82	14.	0.01	26.8	91.2	150	10.37	34.926	5.86	26.850	120.9	0.211						
649	3.35	34.179	6.22	1.99	20.	0.00	29.3	85.8	200	8.78	34.667	5.79	26.911	115.1	0.272						
798	2.85	34.213	5.79	2.13	31.	0.00	31.5	78.9	250	7.05	34.446	5.78	26.996	107.1	0.330						
998	2.72	34.315	5.02	2.31	46.	0.00	34.0	70.1	300	5.56	34.272	6.03	27.054	101.6	0.384						
1199	2.778	34.442	4.45	2.42	57.	0.00	34.9	61.0	400	4.46	34.198	6.36	27.121	95.2	0.486						
1398	2.695	34.524	4.22	2.39	65.	0.00	35.2	54.1	500	3.95	34.183	6.45	27.164	91.2	0.583						
1599	2.700	34.621	4.25	2.31	68.	0.00	35.9	46.8	600	3.53	34.178	6.33	27.202	87.6	0.677						
1798	2.690	34.689	4.36	2.21	69.	0.00	32.5	41.6	700	3.15	34.187	6.09	27.245	83.5	0.768						
1999	2.664	34.740	4.55	2.10	68.	0.00	30.9	37.6	800	2.85	34.215	5.78	27.294	78.8	0.854						
2200	2.519	34.762	4.64	2.08	72.	0.00	30.4	34.7	1000	2.72	34.317	5.01	27.387	70.0	1.013						
2400	2.450	34.784	4.80	1.99	71.	0.00	29.5	32.5	1200	2.78	34.443	4.45	27.483	61.0	1.157						
2602	2.249	34.780	4.82	2.01	77.	0.00	29.7	31.2	1500	2.70	34.576	4.24	27.595	50.3	1.349						
2802	2.075	34.776	4.89	2.04	82.	0.00	29.8	30.1	1750	2.69	34.676	4.33	27.676	42.7	1.490						
3004	1.878	34.761	4.79	2.10	90.	0.00	30.7	29.8	2000	2.66	34.741	4.55	27.730	37.5	1.619						
3257	1.531	34.737	4.82	2.21	104.	0.00	32.0	29.1	2250	2.50	34.769	4.68	27.766	34.1	1.740						
3507	1.292	34.724	4.86	2.23	111.	0.00	32.5	28.5	2500	2.36	34.783	4.81	27.790	31.8	1.856						
									2750	2.12	34.777	4.88	27.805	30.4	1.967						
									3000	1.88	34.761	4.79	27.812	29.8	2.074						
									3250	1.54	34.739	4.82	27.818	29.2	2.177						
									3500	1.30	34.725	4.86	27.825	28.5	2.275						

RV MELVILLE										INCOMED LEG XIII									
LATITUDE 48 48.0S		LONGITUDE 57 02.8W		MO/DAY/YR 12/18/78		MESSENGER 0450 GMT		TIME DT		BOTTOM 741M		WIND 330		SPEED 14KT		WEATHER		DOMINANT WAVES	
Z	T	S	O2	P04	SIO3	NO2	NO3	DT	Z	T	S	O2	SIWT	DT	DD				
1	7.70	34.039	7.93	1.07	1.	0.18	15.1	146.1	0	7.70	34.039	7.93	26.585	146.1	0.000				
22	7.62	34.054		1.07	1.	0.17	15.4	143.9	10	7.67	34.047	7.75	26.595	145.1	0.015				
42	7.01	34.096		1.20	1.	0.15	16.5	132.6	20	7.63	34.054	7.56	26.606	144.1	0.029				
62	6.27	34.110	6.98	1.30	2.	0.14	17.6	122.1	30	7.42	34.072	7.39	26.651	139.8	0.043				
77	5.85	34.114	6.85	1.30	3.	0.11	17.4	116.8	50	6.71	34.105	7.11	26.774	128.1	0.070				
103	4.82	34.132	7.09	1.55	9.	0.16	21.0	103.8	75	5.92	34.125	6.86	26.887	117.5	0.101				
123	4.63	34.136	7.07	1.56	9.	0.20	21.8	101.5	100	4.93	34.131	7.05	27.017	105.2	0.129				
144	4.39	34.157	6.92	1.61	10.	0.15	23.4	97.5	125	4.61	34.139	7.06	27.059	101.1	0.155				
174	4.27	34.168	6.91	1.62	11.	0.03	23.9	95.4	150	4.86	34.162	6.92	27.104	96.9	0.180				
205	4.15	34.169	6.90	1.65	11.	0.03	24.3	94.2	200	4.17	34.170	6.90	27.131	94.3	0.229				
245	3.96	34.164	6.89	1.65	12.	0.02	25.0	92.7	250	3.95	34.164	6.89	27.149	92.6	0.277				
276	3.90	34.161	6.89	1.70	13.	0.02	25.1	92.3	300	3.83	34.159	6.89	27.157	91.8	0.324				
327	3.735	34.155	6.89	1.72	14.	0.02	25.5	91.2	400	3.52	34.148	6.88	27.179	89.8	0.418				
393	3.554	34.149	6.88	1.75	15.	0.03	26.0	90.0	500	3.12	34.142	6.66	27.212	86.6	0.509				
469	3.282	34.137	6.78	1.84	18.	0.02	27.3	87.7	600	3.02	34.173	6.25	27.246	83.4	0.598				
550	3.044	34.155	6.44	1.94	22.	0.01	28.7	84.9	700	2.96	34.212	5.85	27.282	80.1	0.684				
630	3.017	34.184	6.13	1.98	27.	0.02	29.9	82.5											
711	2.952	34.215	5.81	2.09	32.	0.01	31.1	79.6											

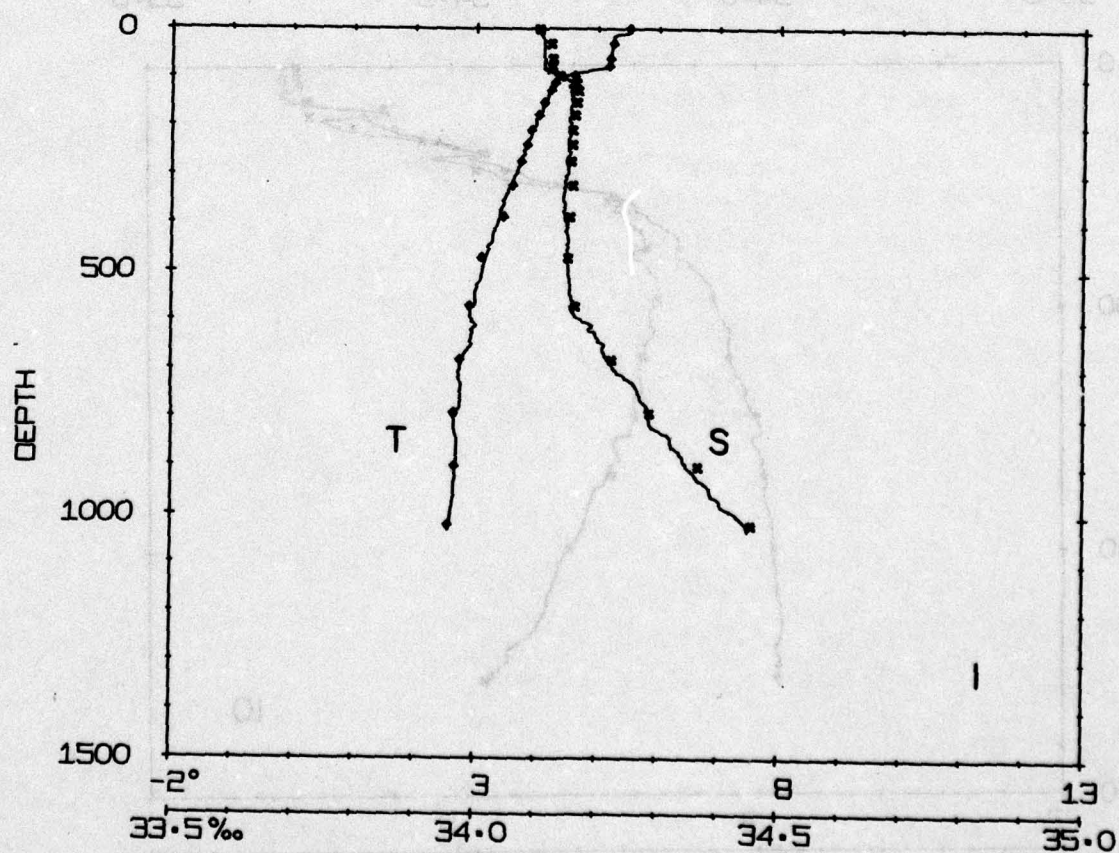
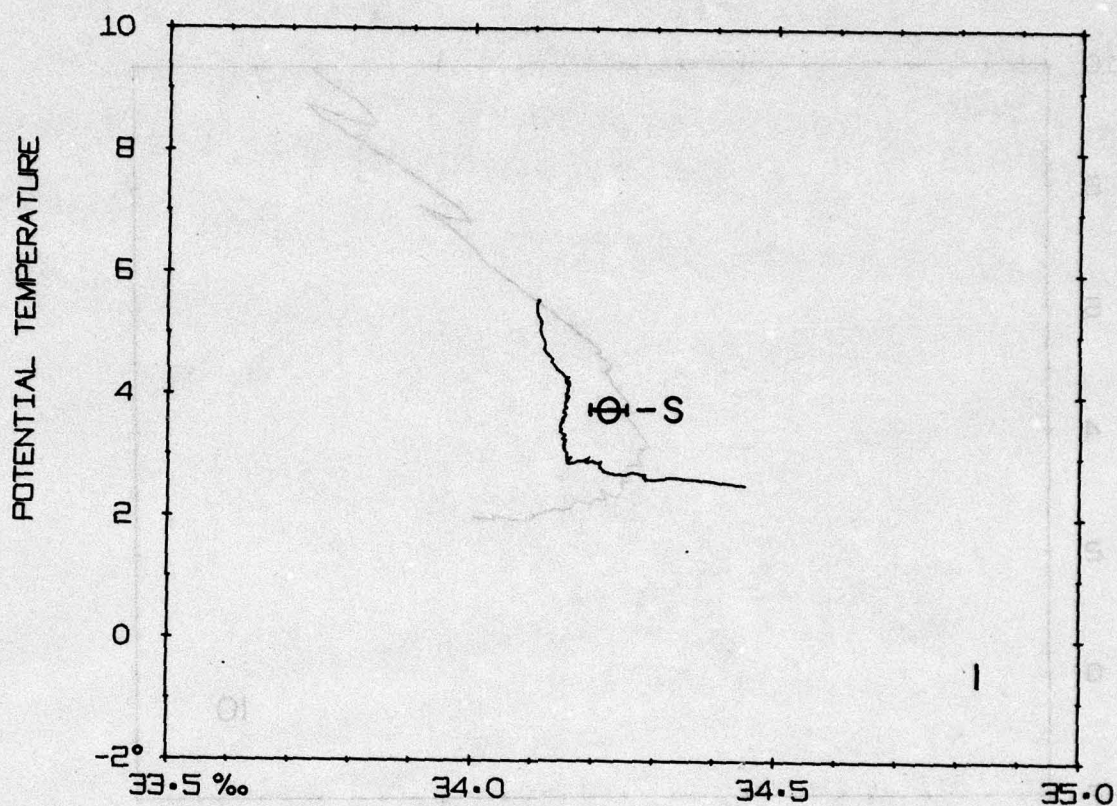
47						INDOMED LEG XIII CTD						48					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			
46 50.0S		53 43.0W		12/16/78		1956 GMT		48 48.0S		57 52.8W		12/18/78		0413 GMT			
Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T	DT	DD	Z	T	S	SIGMA T		
0	12.219	34.926	26.508	153.3	0.000	0	7.738	33.027	25.787	222.0	0.000	0	7.738	33.027	25.787		
10	12.192	34.933	26.519	152.3	0.015	10	7.701	33.971	26.532	151.2	0.019	10	7.701	33.971	26.532		
20	12.069	34.932	26.542	150.1	0.030	20	7.347	34.047	26.642	140.7	0.033	20	7.347	34.047	26.642		
30	11.901	34.929	26.572	147.3	0.045	30	7.065	34.078	26.706	134.6	0.047	30	7.065	34.078	26.706		
40	11.702	34.939	26.617	143.0	0.060	40	6.818	34.092	26.751	130.4	0.060	40	6.818	34.092	26.751		
50	11.681	34.941	26.623	142.5	0.074	50	6.628	34.098	26.781	127.5	0.073	50	6.628	34.098	26.781		
75	11.658	34.940	26.626	142.1	0.110	75	5.641	34.113	26.919	114.4	0.104	75	5.641	34.113	26.919		
100	11.081	34.951	26.742	131.2	0.145	100	4.756	34.137	27.042	102.8	0.131	100	4.756	34.137	27.042		
125	10.627	34.917	26.797	125.9	0.178	125	4.495	34.149	27.080	99.2	0.157	125	4.495	34.149	27.080		
150	10.302	34.882	26.827	123.1	0.210	150	4.348	34.164	27.108	96.5	0.182	150	4.348	34.164	27.108		
175	9.741	34.796	26.856	120.3	0.241	175	4.272	34.170	27.121	95.3	0.206	175	4.272	34.170	27.121		
200	8.900	34.677	26.902	116.0	0.272	200	4.178	34.170	27.131	94.4	0.230	200	4.178	34.170	27.131		
225	8.242	34.590	26.936	112.8	0.301	225	4.064	34.168	27.141	93.4	0.254	225	4.064	34.168	27.141		
250	7.692	34.530	26.971	109.4	0.330	250	3.984	34.165	27.147	92.8	0.278	250	3.984	34.165	27.147		
275	6.338	34.354	27.021	104.7	0.358	275	3.924	34.164	27.152	92.3	0.302	275	3.924	34.164	27.152		
300	5.736	34.287	27.045	102.5	0.385	300	3.807	34.160	27.161	91.5	0.325	300	3.807	34.160	27.161		
350	4.910	34.221	27.091	98.1	0.437	350	3.674	34.155	27.170	90.6	0.372	350	3.674	34.155	27.170		
400	4.506	34.201	27.120	95.4	0.487	400	3.554	34.153	27.180	89.7	0.419	400	3.554	34.153	27.180		
450	4.166	34.184	27.143	93.2	0.536	450	3.306	34.143	27.196	88.2	0.465	450	3.306	34.143	27.196		
500	3.989	34.184	27.161	91.4	0.585	500	3.127	34.144	27.213	86.5	0.510	500	3.127	34.144	27.213		
550	3.836	34.185	27.177	89.9	0.632	550	3.051	34.161	27.234	84.6	0.554	550	3.051	34.161	27.234		
600	3.654	34.185	27.196	88.2	0.679	600	3.009	34.180	27.253	82.8	0.598	600	3.009	34.180	27.253		
650	3.436	34.182	27.215	86.4	0.725	650	2.990	34.195	27.267	81.5	0.641	650	2.990	34.195	27.267		
700	3.270	34.190	27.237	84.3	0.770	700	2.957	34.214	27.285	79.8	0.684	700	2.957	34.214	27.285		
750	3.051	34.199	27.264	81.7	0.814	714	2.949	34.221	27.291	79.2	0.695	714	2.949	34.221	27.291		
800	2.958	34.219	27.289	79.4	0.857												
850	2.849	34.239	27.314	76.9	0.899												
900	2.732	34.253	27.336	74.9	0.939												
950	2.787	34.289	27.359	72.6	0.979												
1000	2.786	34.326	27.389	69.8	1.017												
1100	2.776	34.374	27.428	66.1	1.092												
1200	2.727	34.423	27.472	62.0	1.163												
1300	2.703	34.481	27.520	57.4	1.230												
1400	2.666	34.522	27.556	54.0	1.294												
1500	2.708	34.565	27.586	51.1	1.355												
1600	2.710	34.618	27.629	47.1	1.414												
1700	2.690	34.649	27.655	44.6	1.470												
1800	2.595	34.670	27.680	42.3	1.524												
1900	2.714	34.719	27.709	39.6	1.576												
2000	2.652	34.730	27.723	38.2	1.627												
2100	2.654	34.760	27.747	36.0	1.676												
2200	2.468	34.748	27.753	35.3	1.725												
2300	2.458	34.764	27.767	34.0	1.772												
2400	2.466	34.782	27.780	32.8	1.819												
2500	2.400	34.785	27.788	32.0	1.865												
2600	2.209	34.765	27.788	32.0	1.910												
2700	2.153	34.770	27.797	31.2	1.955												
2800	2.057	34.771	27.805	30.4	1.999												
2900	1.990	34.769	27.809	30.0	2.042												
3000	1.856	34.758	27.811	29.9	2.084												
3100	1.708	34.746	27.813	29.7	2.126												
3200	1.591	34.742	27.818	29.2	2.167												
3300	1.496	34.736	27.820	29.0	2.207												
3400	1.402	34.731	27.823	28.7	2.246												
3500	1.307	34.727	27.827	28.4	2.285												
3563	1.250	34.725	27.829	28.2	2.308												

RV MELVILLE										INCOMED LEG XIII						
LATITUDE		LONGITUDE		MO/DAY/YR		MESSENGER		TIME	BOTTOM	WIND	SPEED	WEATHER	DOMINANT WAVES			
49 24.9S		59 05.6W		12/18/78		1241 GMT			580M	32U	16KT	0	32U 3 5			
Z	T	S	U2	P04	S103	N02	N03	DT	Z	I	S	U2	SIG1	DT	DU	
0	9.54	33.825	6.97	0.79	1.	0.16	9.9	189.0	0	9.54	33.825	6.97	26.133	189.0	0.000	
20	8.51	33.828	7.05	0.68	1.	0.16	10.4	173.3	10	8.51	33.826	7.01	26.233	179.5	0.018	
41	9.39	33.837	6.88	0.64	1.	0.16	10.6	170.9	20	8.51	33.828	7.05	26.299	173.3	0.036	
62	8.57	33.888	7.05	1.00	3.	0.17	14.1	142.5	30	8.45	33.834	6.96	26.311	172.1	0.053	
77	5.49	33.933	6.88	1.48	6.	0.19	18.8	126.2	50	7.69	33.854	6.96	26.440	159.9	0.087	
103	5.17	33.999	6.85	1.55	6.	0.15	20.5	117.6	75	5.61	33.928	6.91	26.776	128.0	0.123	
123	5.01	34.034	6.63	1.58	7.	0.12	21.5	113.2	100	5.21	34.002	6.85	26.882	117.9	0.154	
144	4.88	34.051	6.78	1.68	9.	0.11	22.5	110.6	125	5.00	34.037	6.63	26.935	112.9	0.183	
173	4.77	34.068	6.78	1.65	9.	0.11	23.0	108.1	150	4.85	34.056	6.78	26.965	110.0	0.211	
204	4.65	34.095	6.79	1.67	10.	0.08	23.6	104.8	200	4.66	34.093	6.79	27.016	105.2	0.266	
244	4.55	34.115	6.87	1.66	10.	0.06	23.7	102.3	250	4.52	34.119	6.87	27.052	101.2	0.319	
275	4.42	34.128	6.87	1.67	10.	0.06	24.1	100.0	300	4.36	34.139	6.70	27.085	98.6	0.370	
326	4.34	34.146	6.51	1.85	14.	0.17	25.2	97.8								
372	4.35	34.147	6.50	1.88	14.	0.17	25.3	97.8								

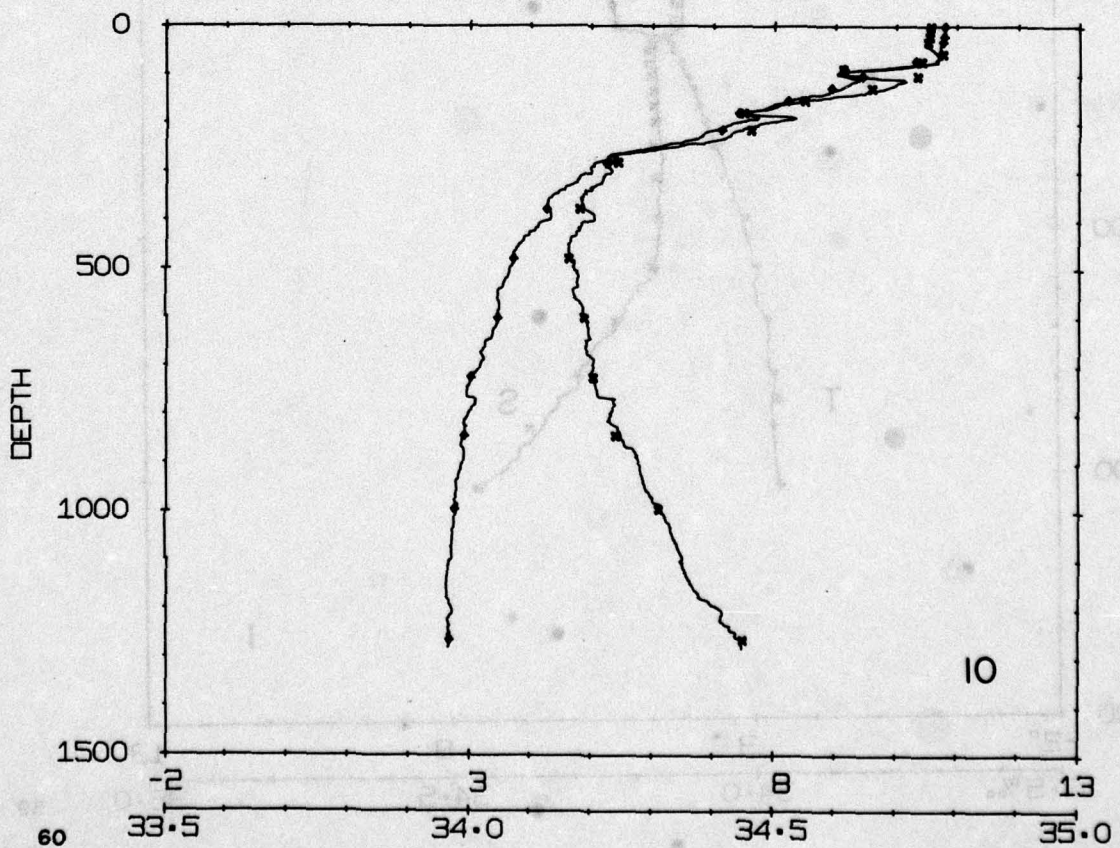
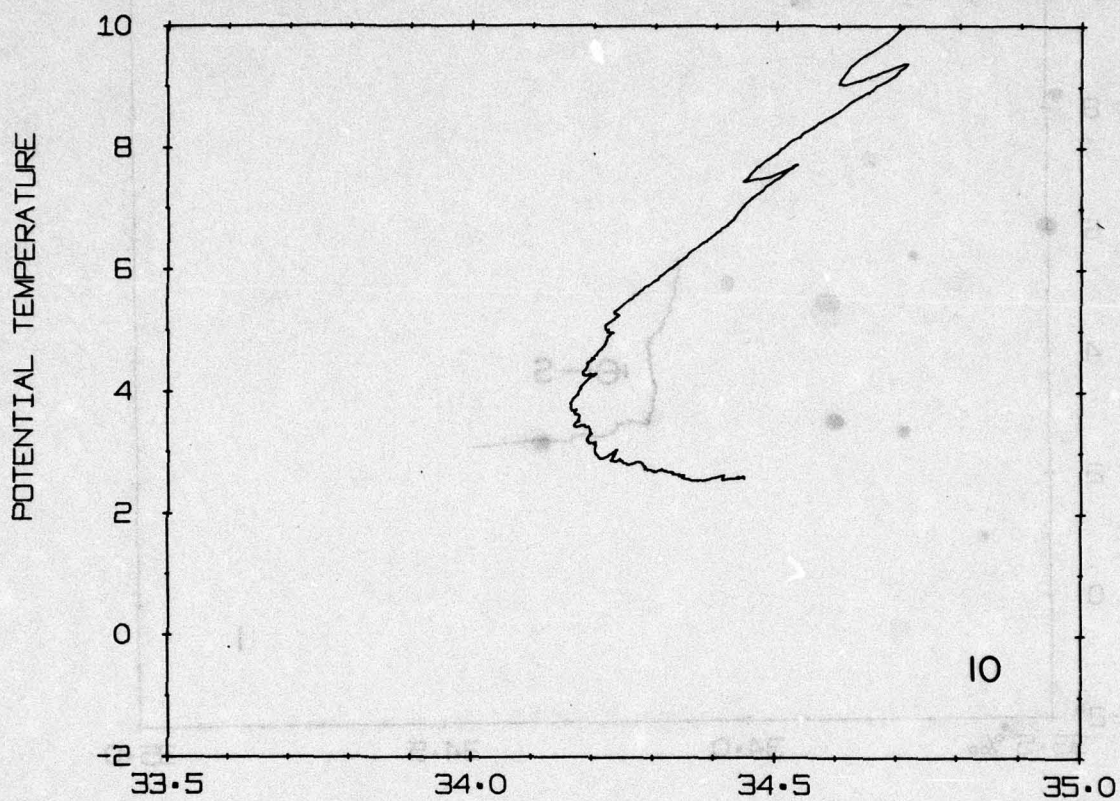
RV MELVILLE					INCOMED LEG XIII												
LATITUDE 49 56. S		LONGITUDE 60 08. W		MO/DAY/YR 12/18/78		MESSENGER 1921 GMT		TIME		BOTTOM 164M		WIND 310 15KT		SPEED 0		DOMINANT WAVES 33u 3 5	
Z	T	S	U2	P04	S103	N02	N03	DT	Z	I	S	U2	SIG1	DT	DU		
1	10.55	33.765	7.98	0.57	0.	0.14	4.7	209.7	0	10.55	33.765	7.98	25.915	209.7	0.00		
11	9.81	33.750	7.75	0.63	0.	0.12	5.8	198.8	10	9.88	33.753	7.77	26.019	199.9	0.02		
32	8.46	33.745	7.18	0.69	1.	0.07	6.2	178.7	20	9.16	33.746	7.41	26.132	189.2	0.04		
42	8.12	33.746	7.50	1.02	1.	0.16	12.1	173.7	30	8.56	33.746	7.20	26.226	180.2	0.05		
57	6.77	33.749	7.39	1.24	3.	0.21	14.6	155.4	50	7.45	33.745	7.44	26.389	164.7	0.09		
72	5.65	33.800	6.46	1.58	6.	0.11	20.4	138.0	75	5.62	33.806	6.45	26.679	137.2	0.13		
88	5.48	33.825	6.41	1.61	8.	0.09	21.6	134.1	100	5.47	33.828	6.39	26.714	133.9	0.16		
109	5.46	33.827	6.38	1.69	7.	0.09	21.7	133.8	125	5.40	33.829	6.25	26.723	133.0	0.19		
124	5.41	33.828	6.26	1.71	6.	0.12	20.9	133.1	150	5.16	33.835	6.15	26.757	129.8	0.23		
145	5.20	33.834	6.17	1.82	6.	0.11	20.8	130.3									

49						INCOMED LEG XIII CTD						50					
LATITUDE		LONGITUDE		MO/DAY/YR		START TIME		LATITUDE		LONGITUDE		MO/DAY/YR		START TIME			
49 24.9S		59 25.6W		12/18/78		1218 GMT		49 56. S		60 08. W		12/18/78		1307 GMT			
Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T	DT	DU	Z	T	S	SIGMA T		
0	9.528	33.821	26.132	189.1	0.000	0	10.447	33.760	25.922	209.0	0.000	0	10.447	33.740	25.922		
10	9.511	33.822	26.135	188.8	0.019	10	9.477	33.740	26.061	175.9	0.020	10	9.477	33.740	26.061		
20	8.592	33.838	26.294	173.7	0.037	20	8.718	33.744	26.203	182.4	0.039	20	8.718	33.744	26.203		
30	8.405	33.836	26.321	171.1	0.054	30	8.450	33.743	26.242	178.7	0.057	30	8.450	33.743	26.242		
40	8.391	33.841	26.327	170.6	0.071	40	8.271	33.741	26.275	176.5	0.075	40	8.271	33.741	26.275		
50	8.360	33.843	26.334	170.0	0.089	50	7.948	33.733	26.367	168.4	0.092	50	7.948	33.733	26.367		
75	5.572	33.926	26.780	127.6	0.126	75	5.542	33.868	26.614	136.6	0.130	75	5.542	33.868	26.614		
100	5.191	33.982	26.874	116.7	0.157	100	5.443	33.874	26.714	135.9	0.164	100	5.443	33.874	26.714		
125	5.041	34.034	26.928	113.6	0.186	125	5.351	33.828	26.724	132.9	0.198	125	5.351	33.828	26.724		
150	4.886	34.053	26.961	110.5	0.215	144	5.216	33.836	26.751	130.3	0.223	144	5.216	33.836	26.751		
175	4.809	34.070	26.983	108.4	0.243												
200	4.719	34.087	27.006	106.1	0.270												
225	4.640	34.101	27.026	104.5	0.297												
250	4.555	34.116	27.047	102.5	0.323												
275	4.437	34.128	27.070	100.1	0.349												
300	4.368	34.146	27.091	98.1	0.375												
350	4.340	34.149	27.076	97.7	0.425												
372	4.351	34.150	27.096	97.6	0.447												

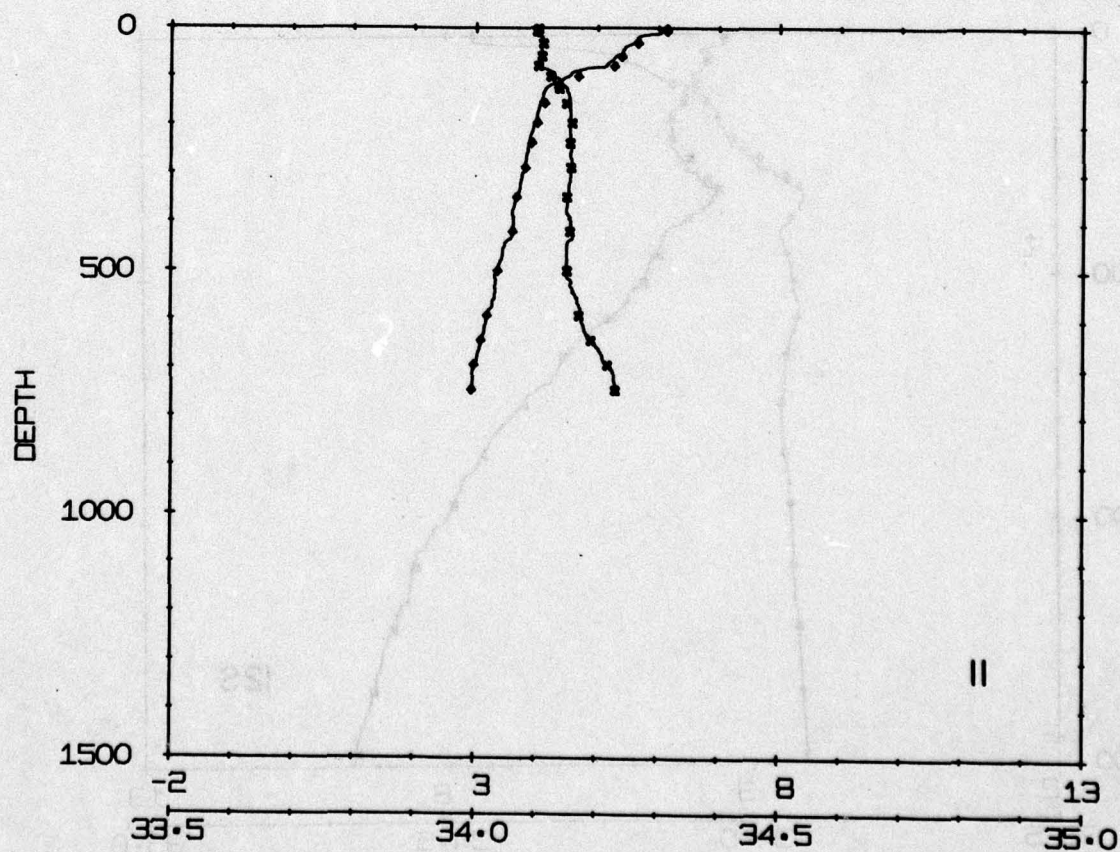
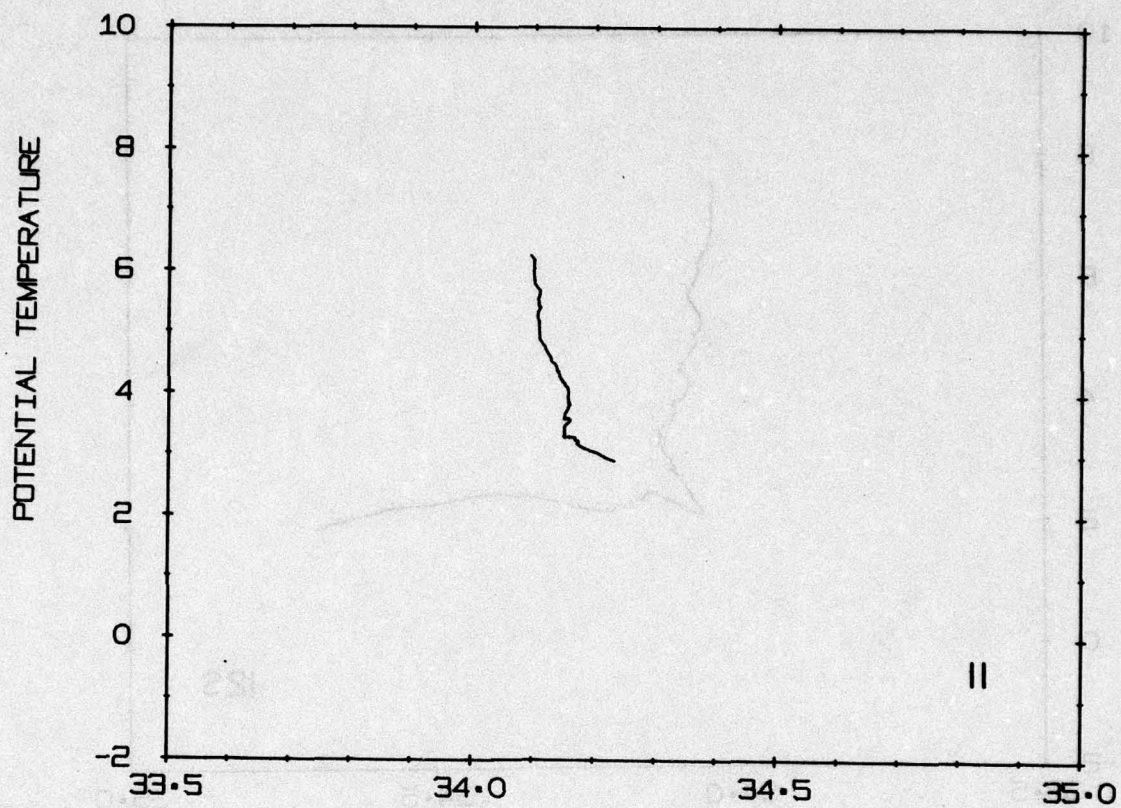
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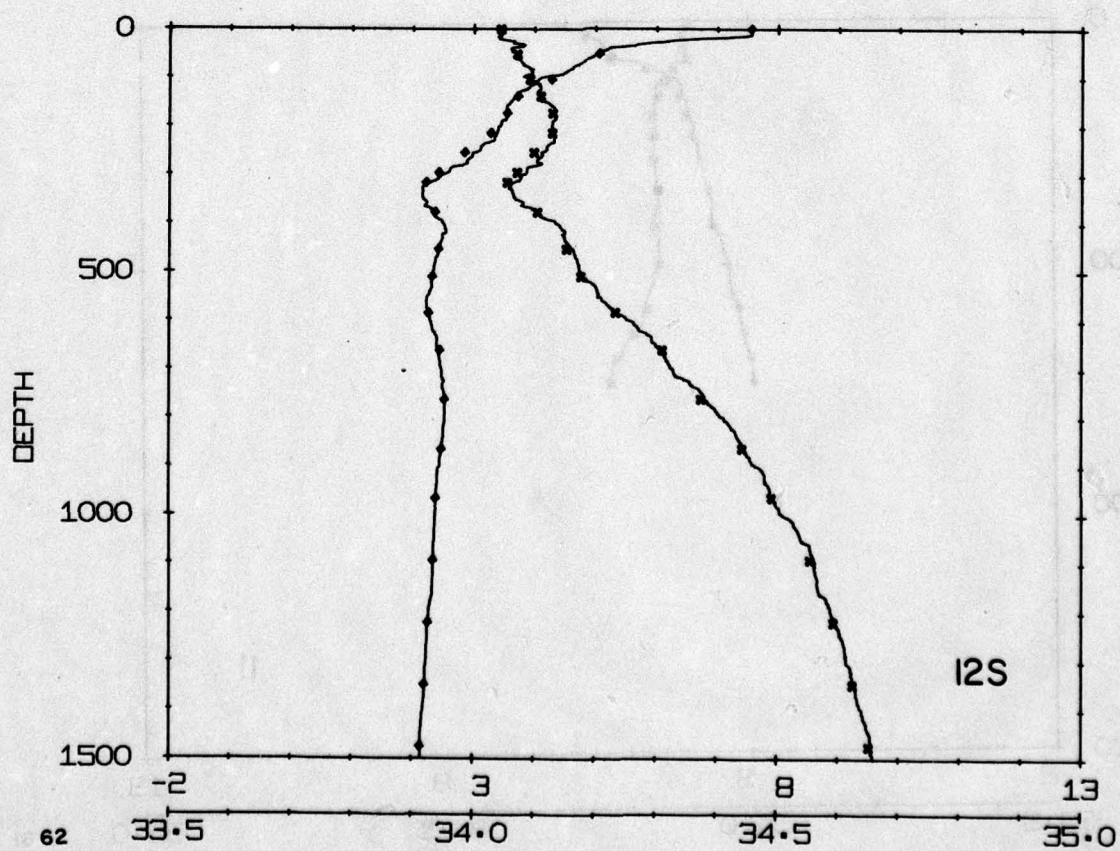
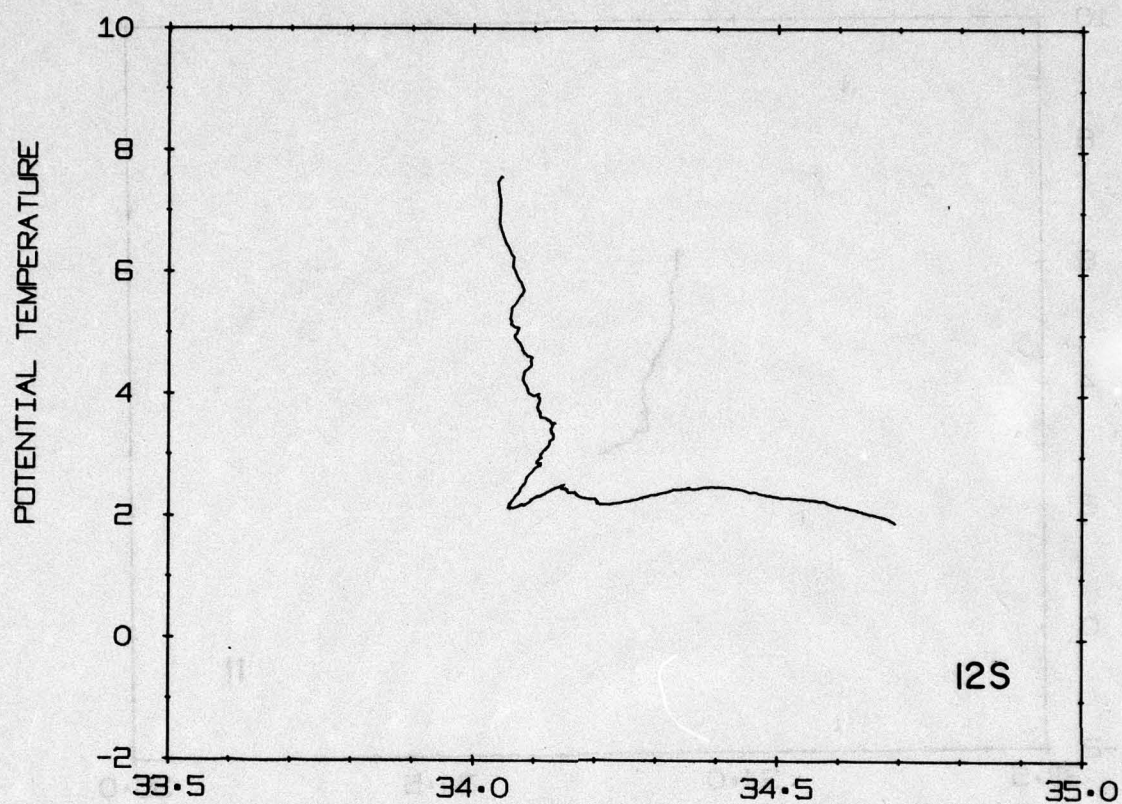
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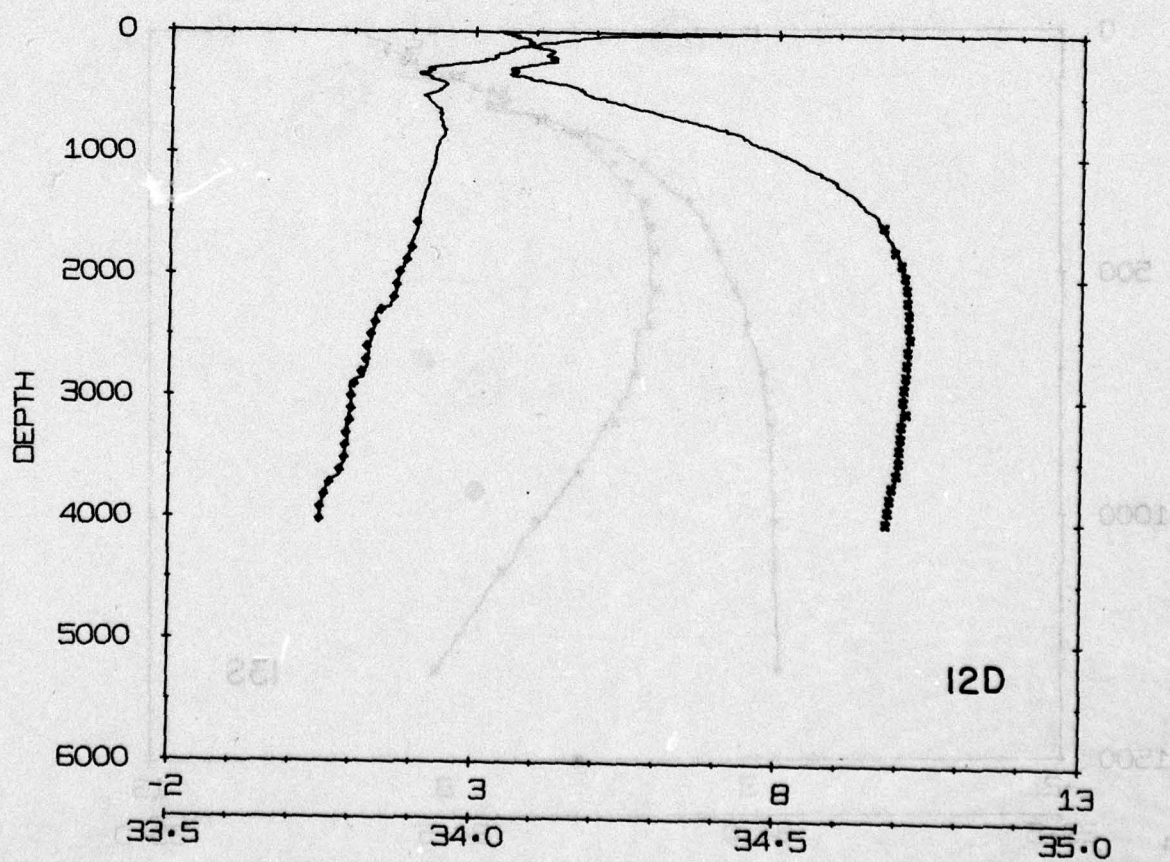
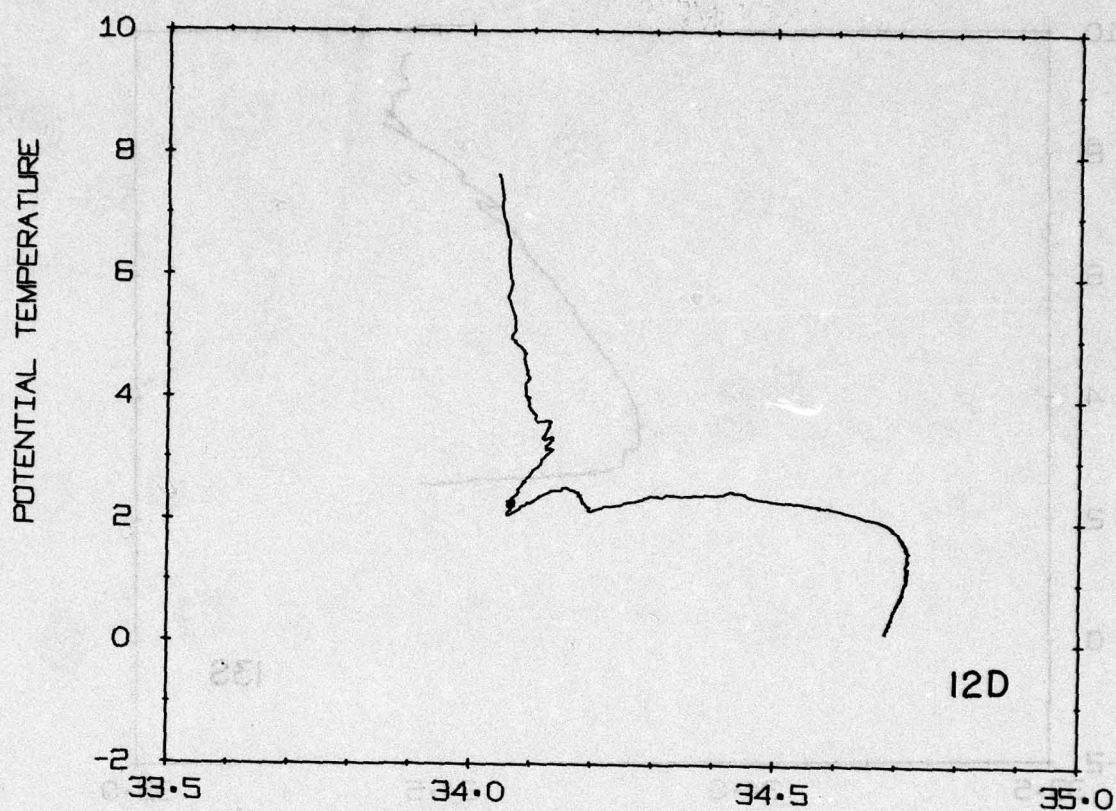
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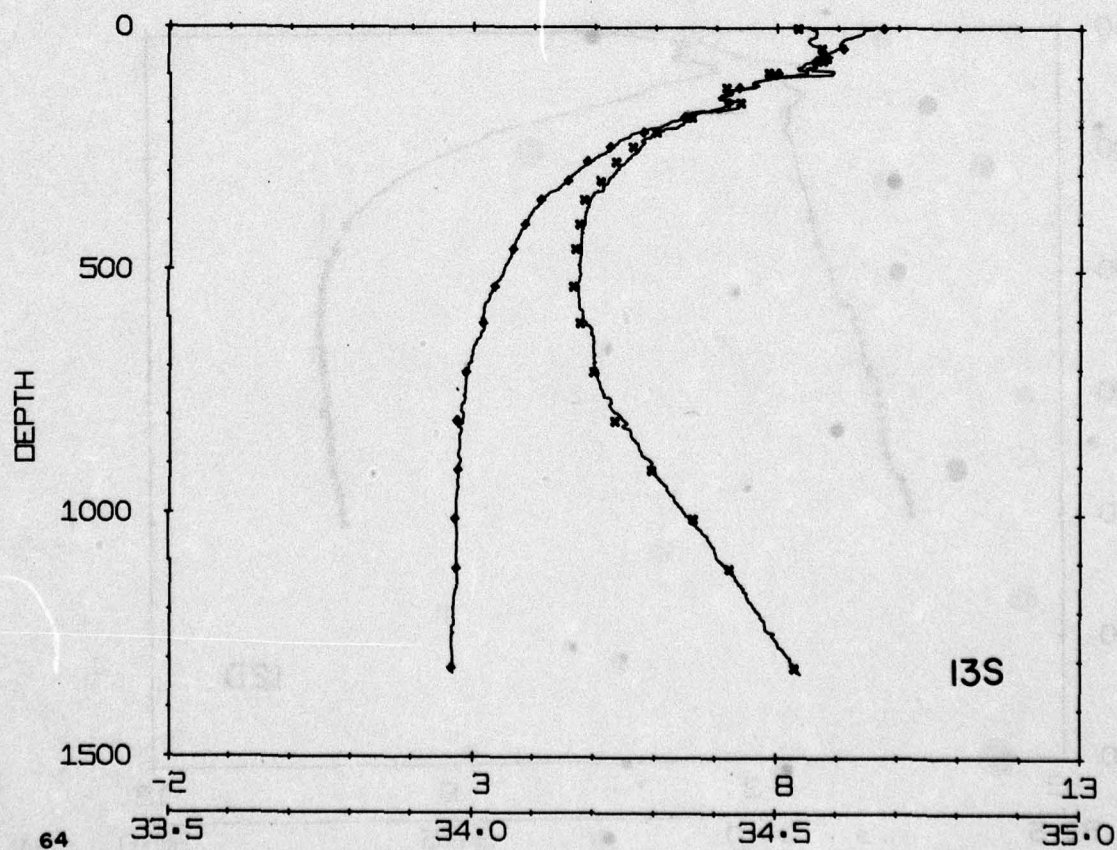
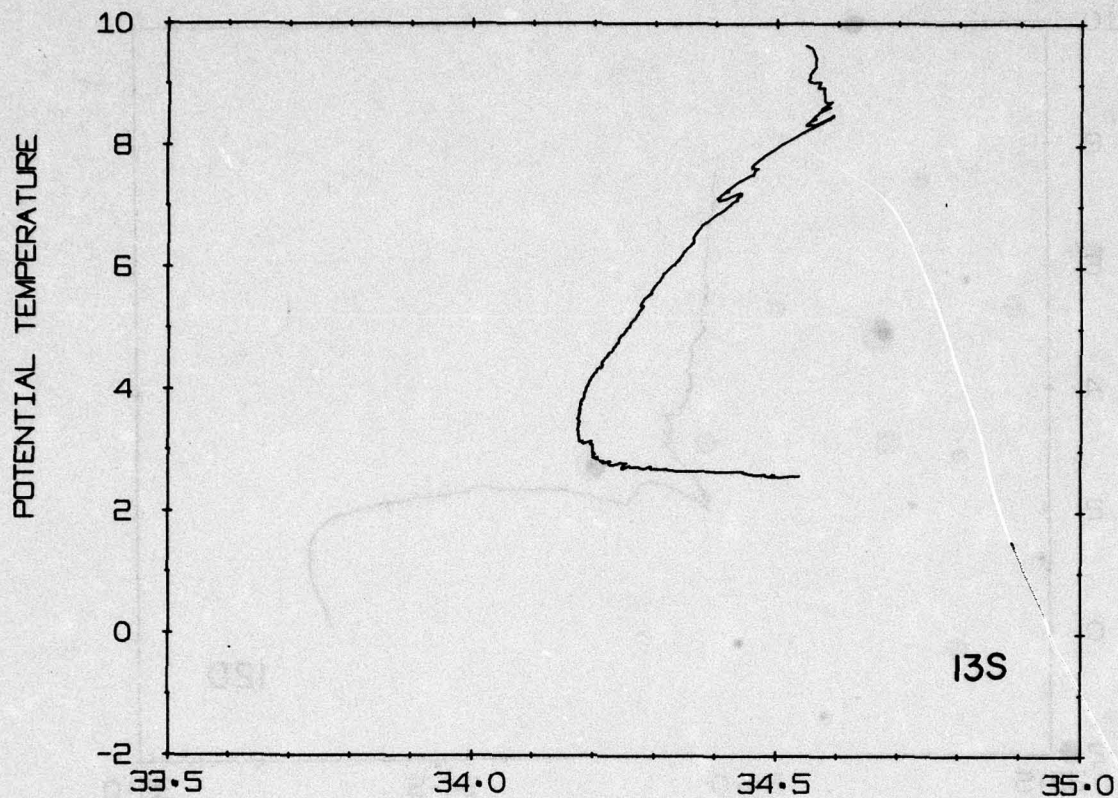
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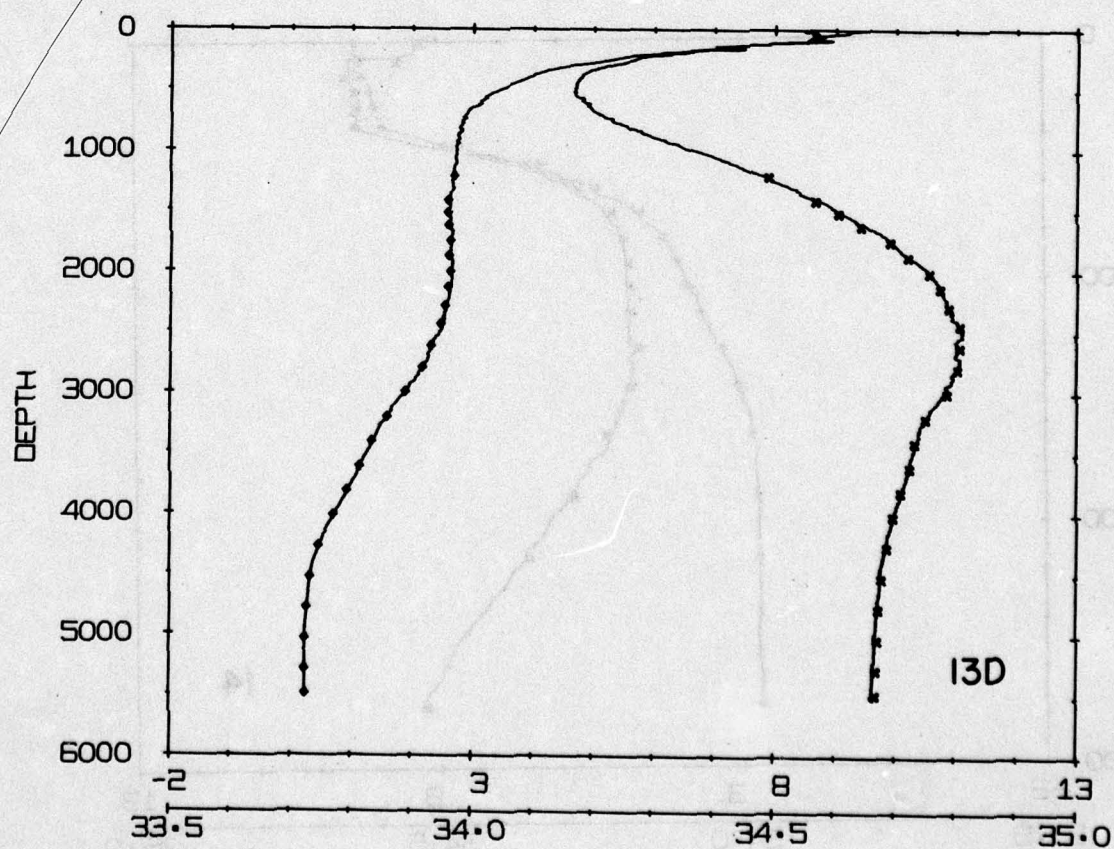
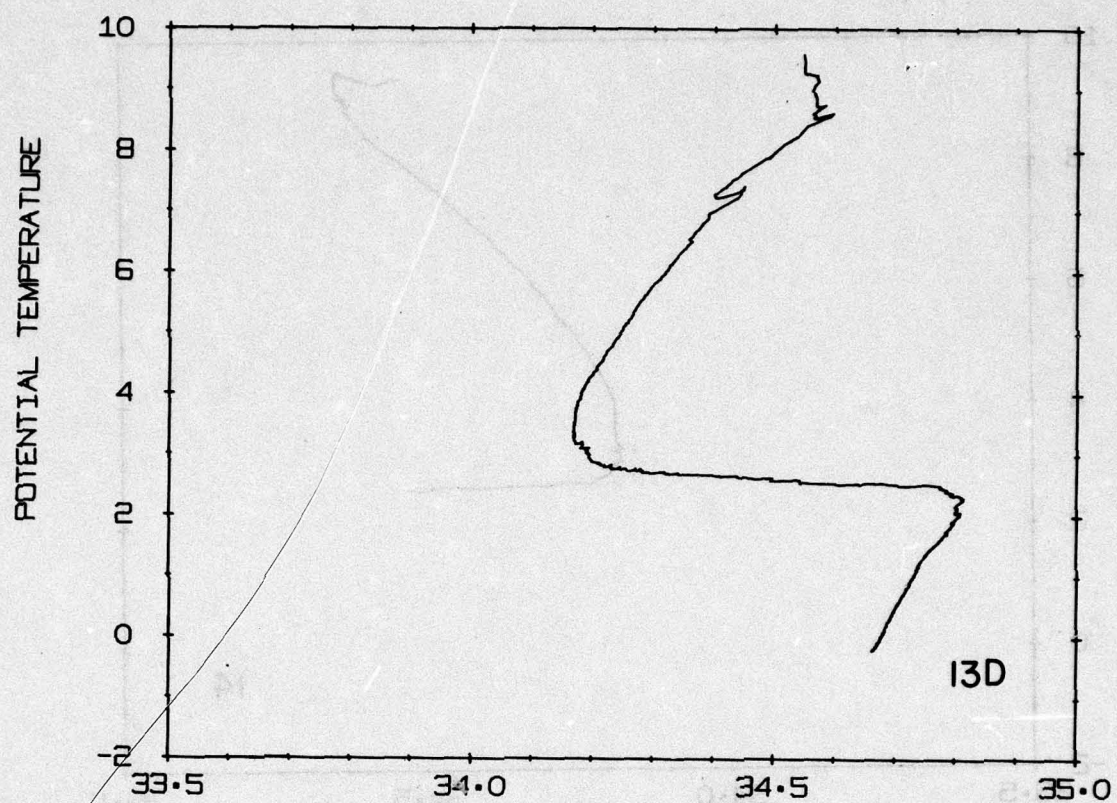
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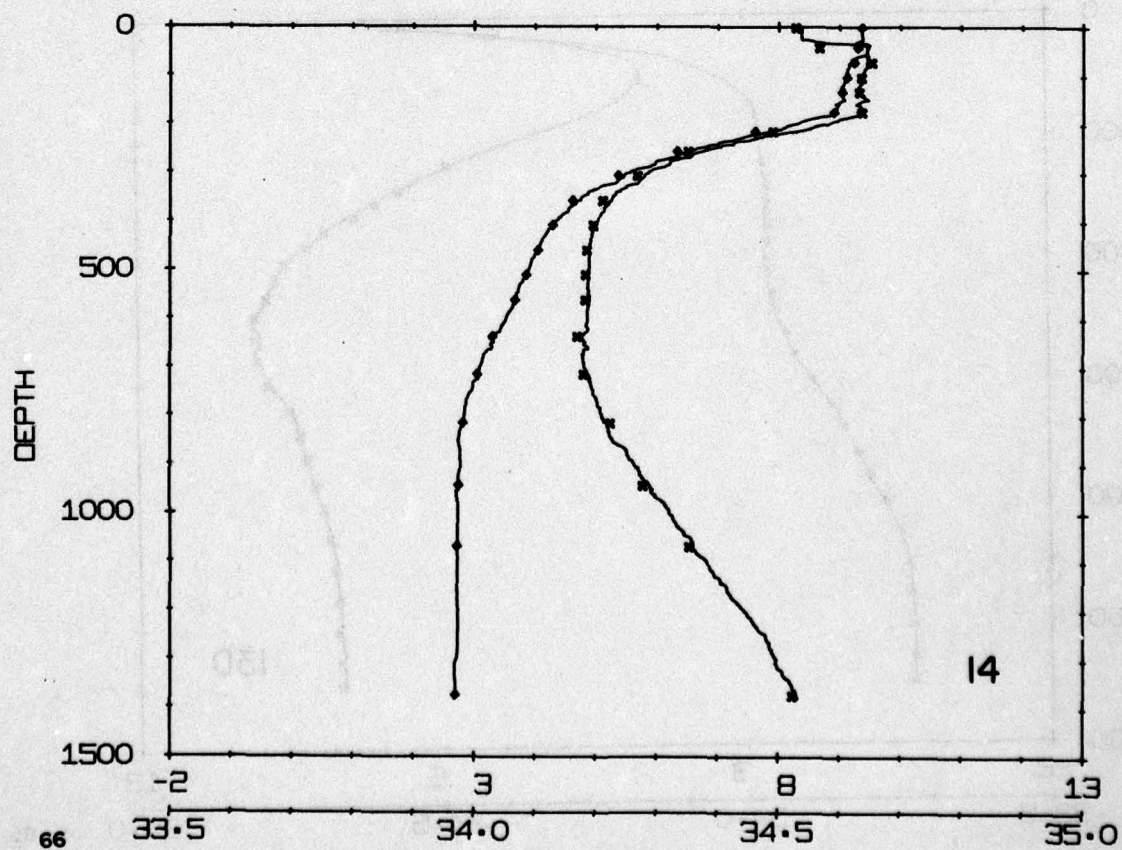
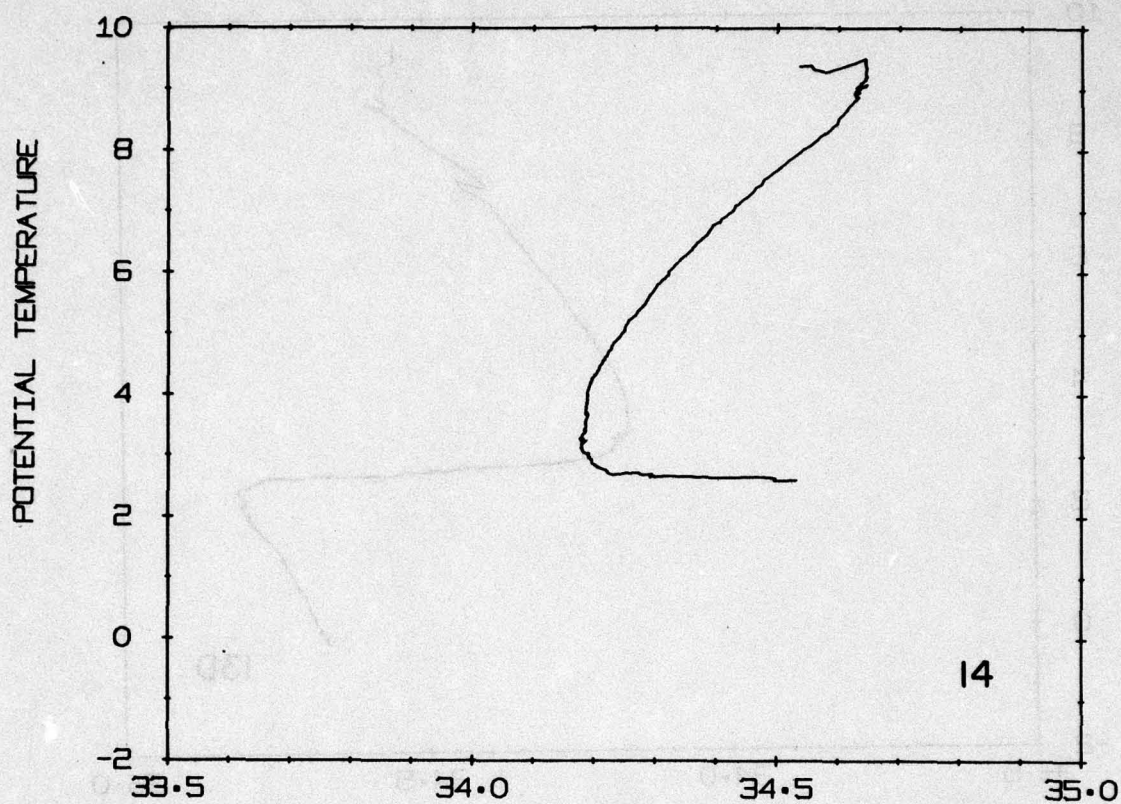
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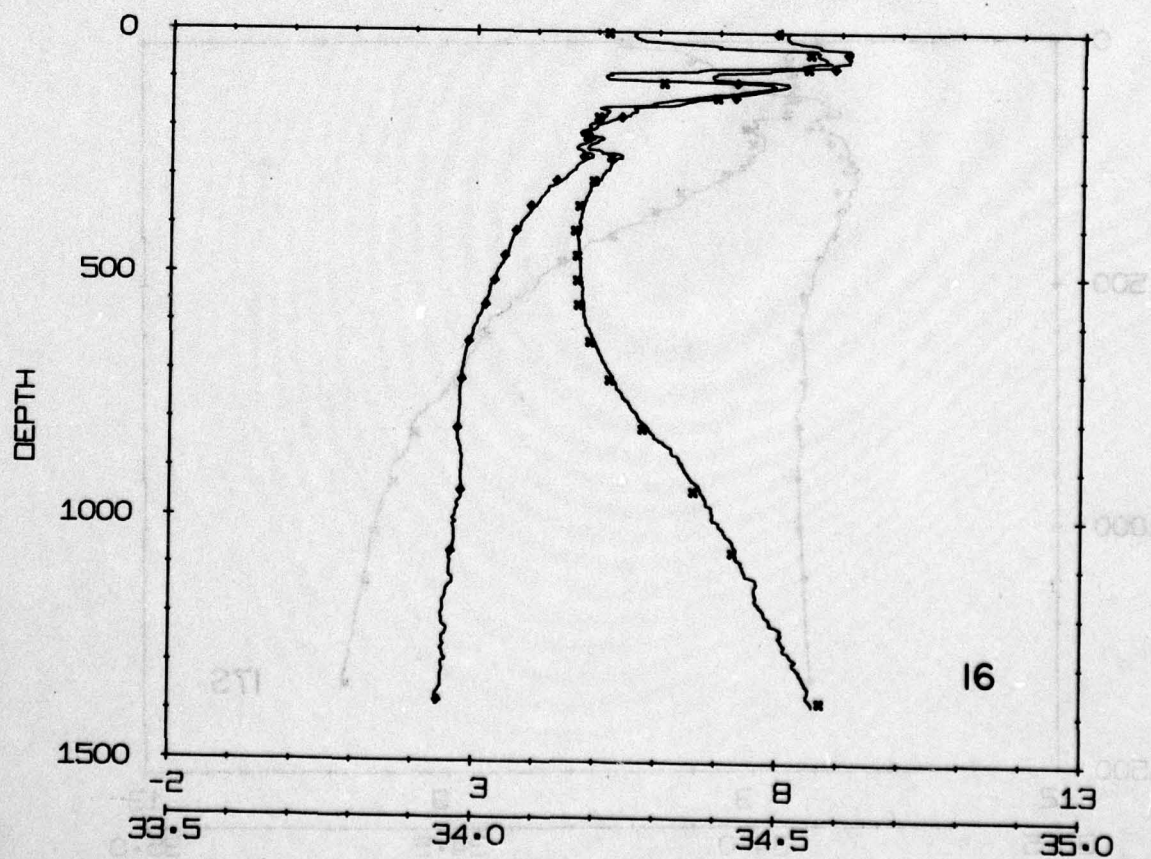
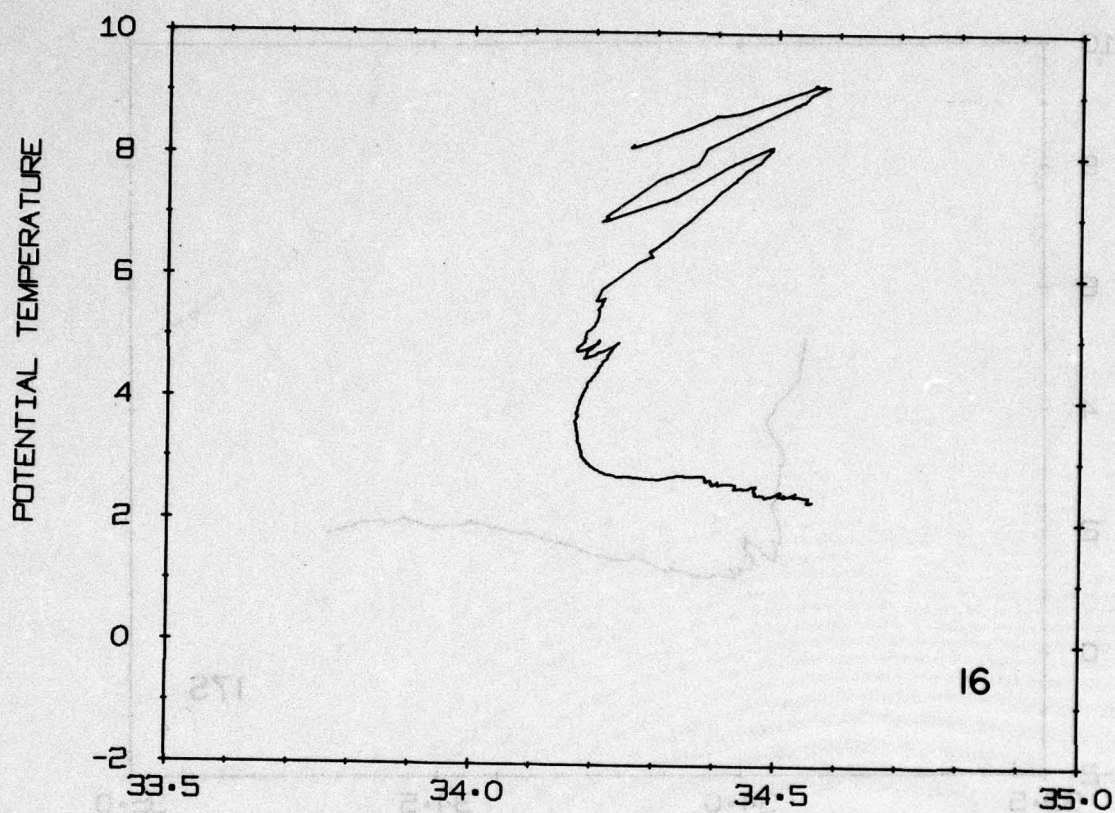
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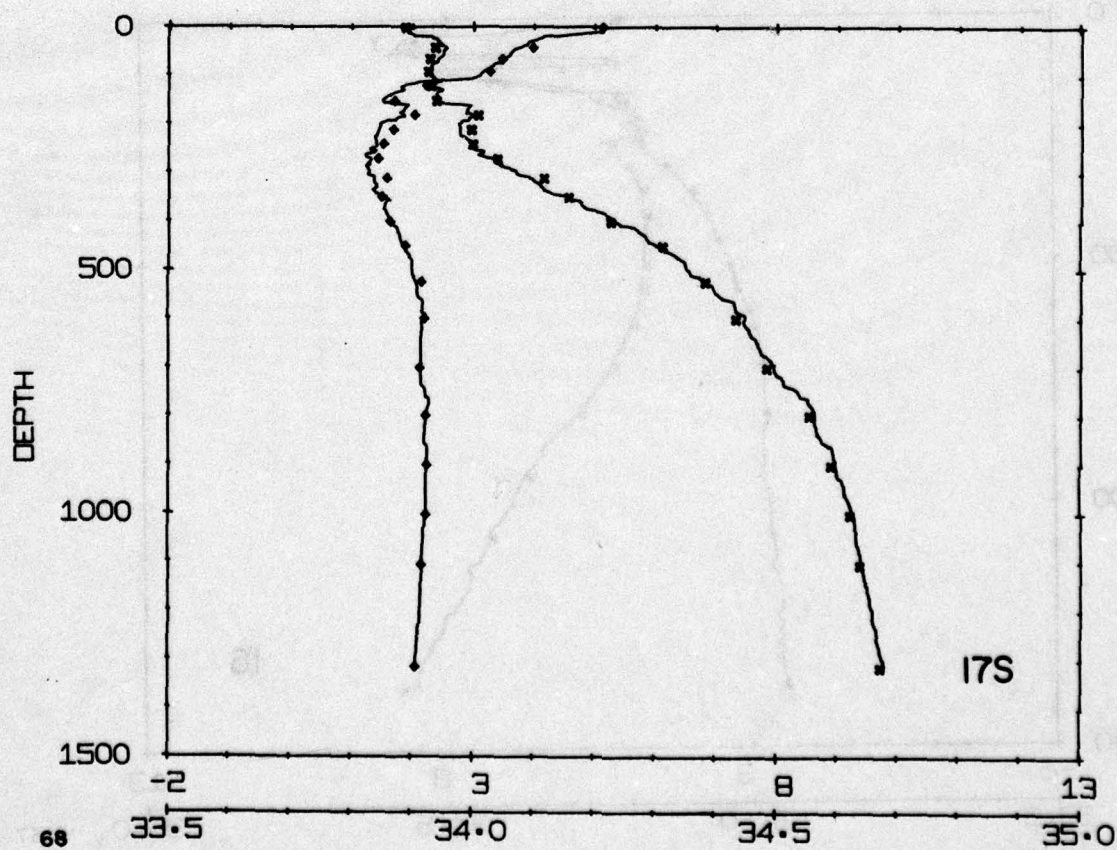
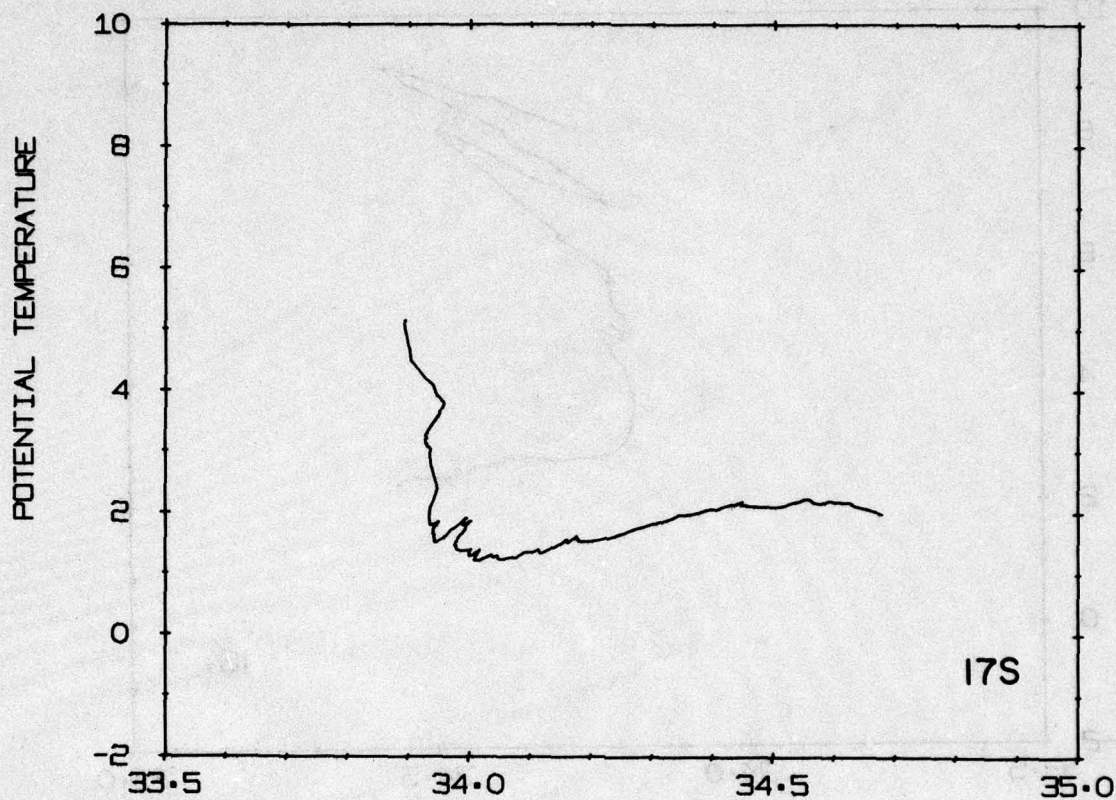
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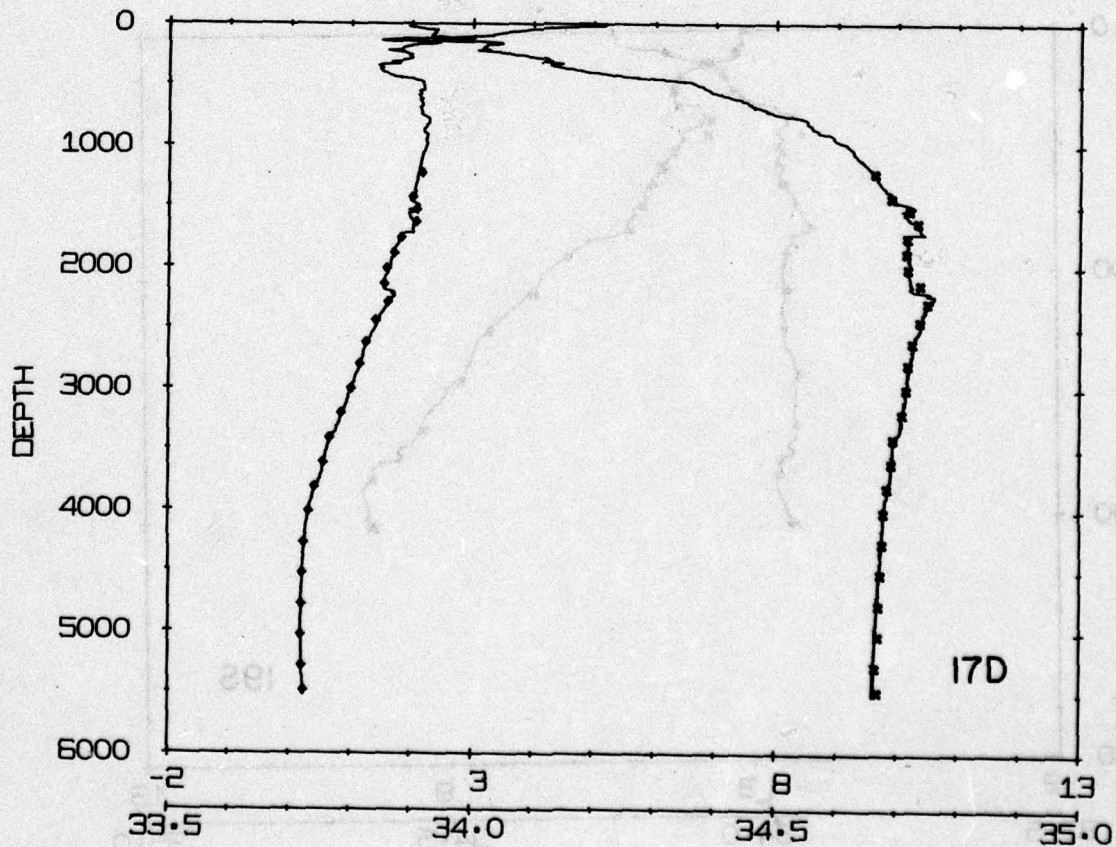
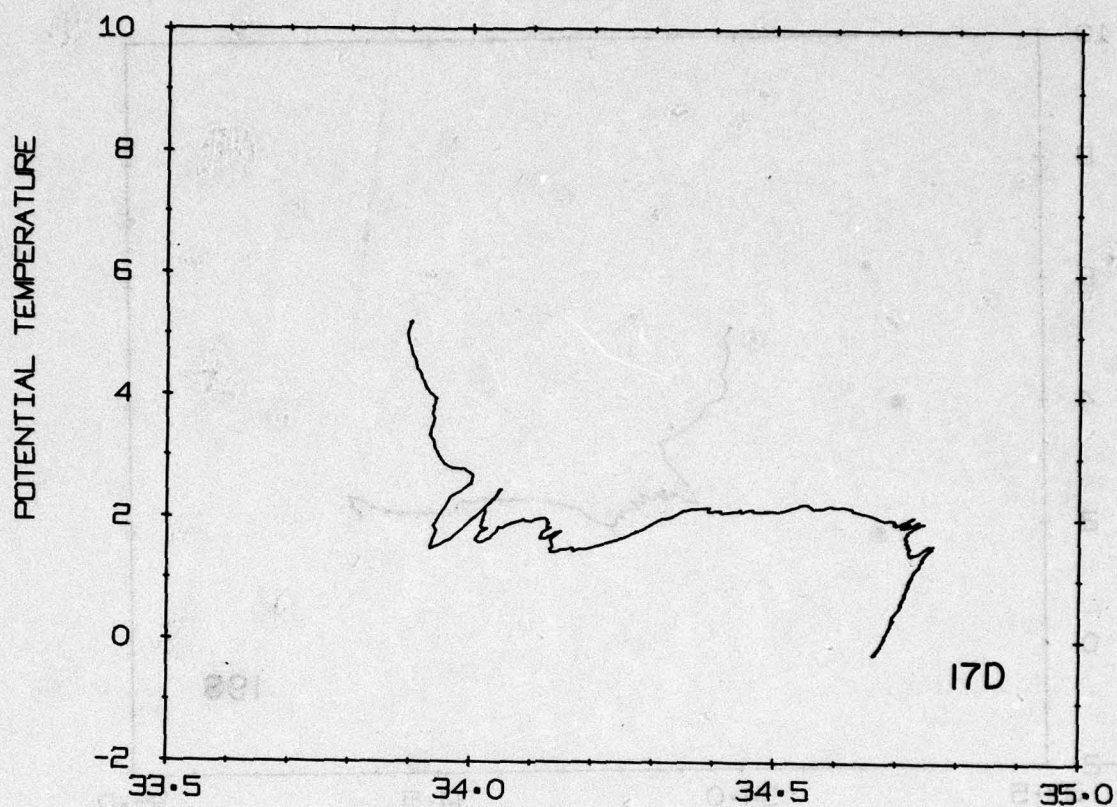
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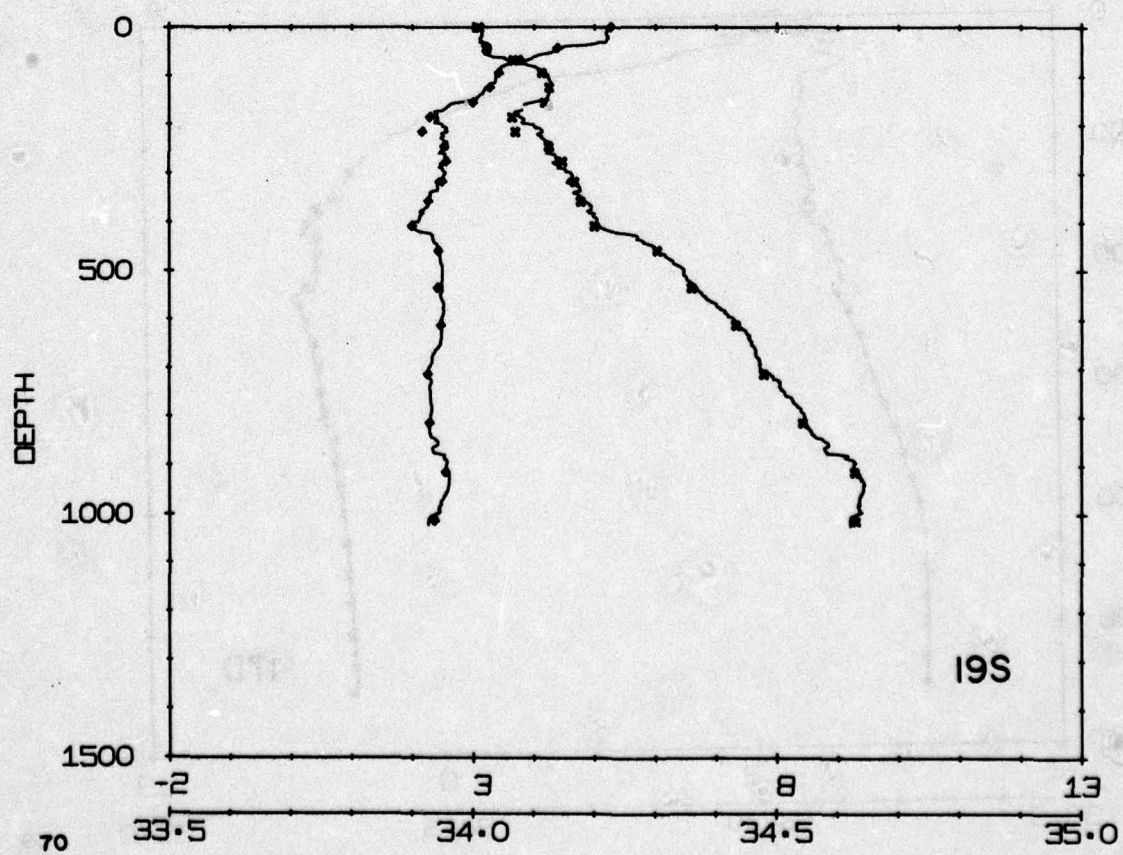
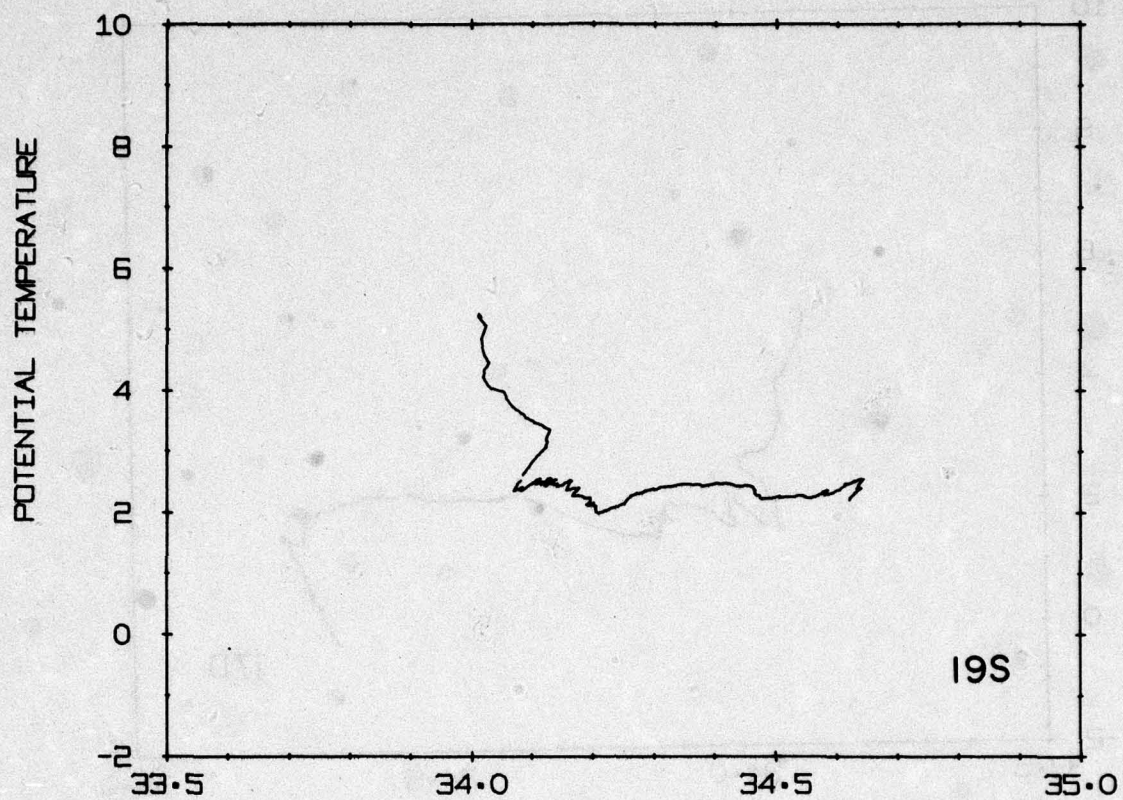
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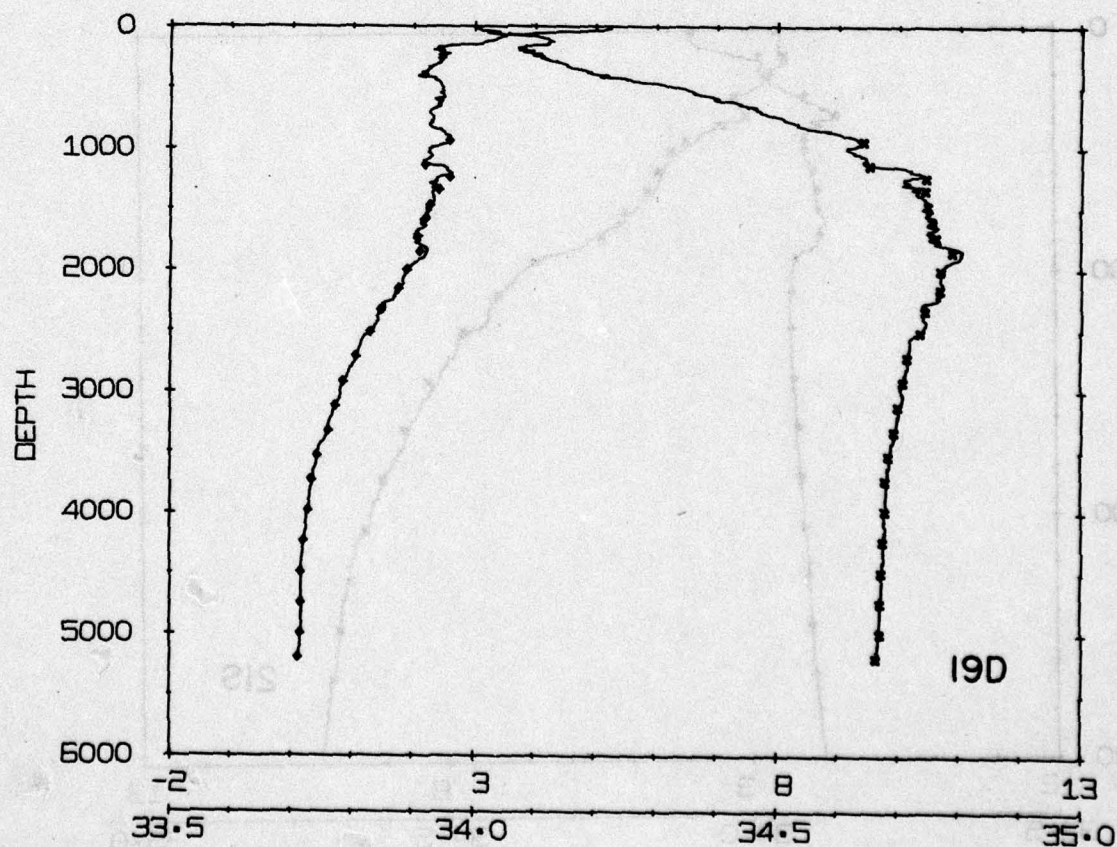
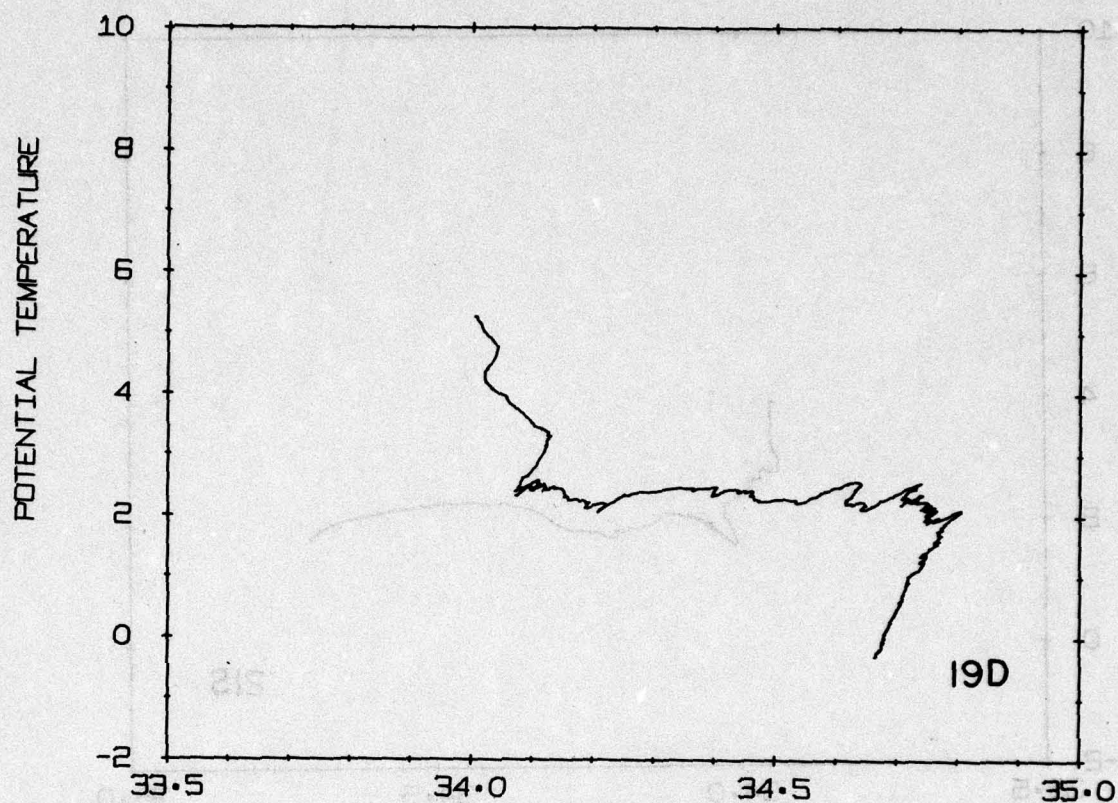
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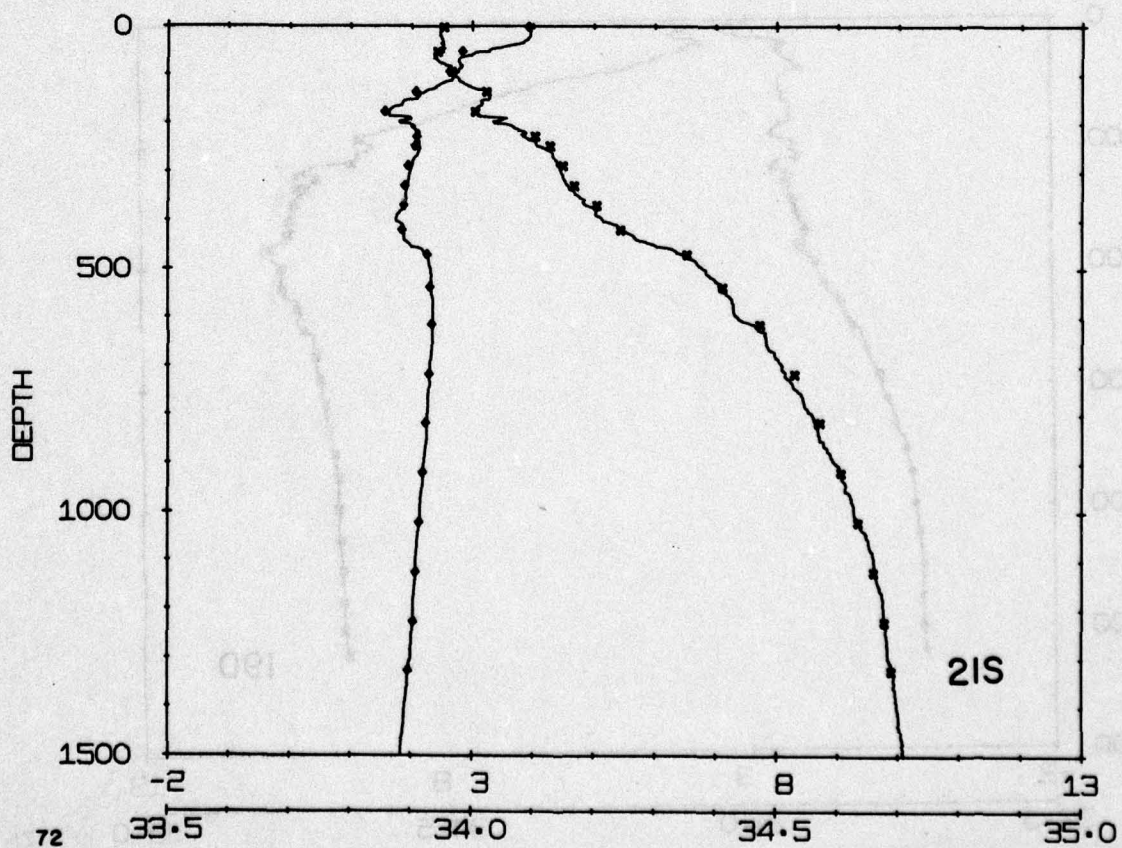
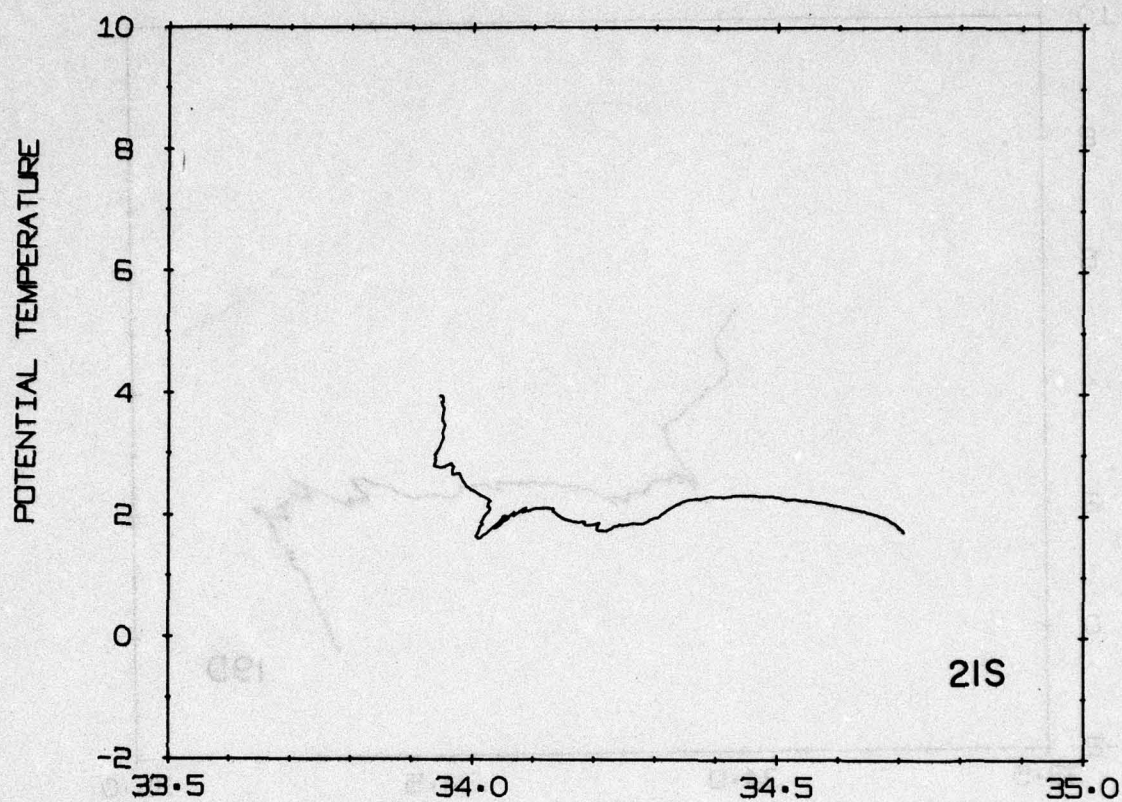
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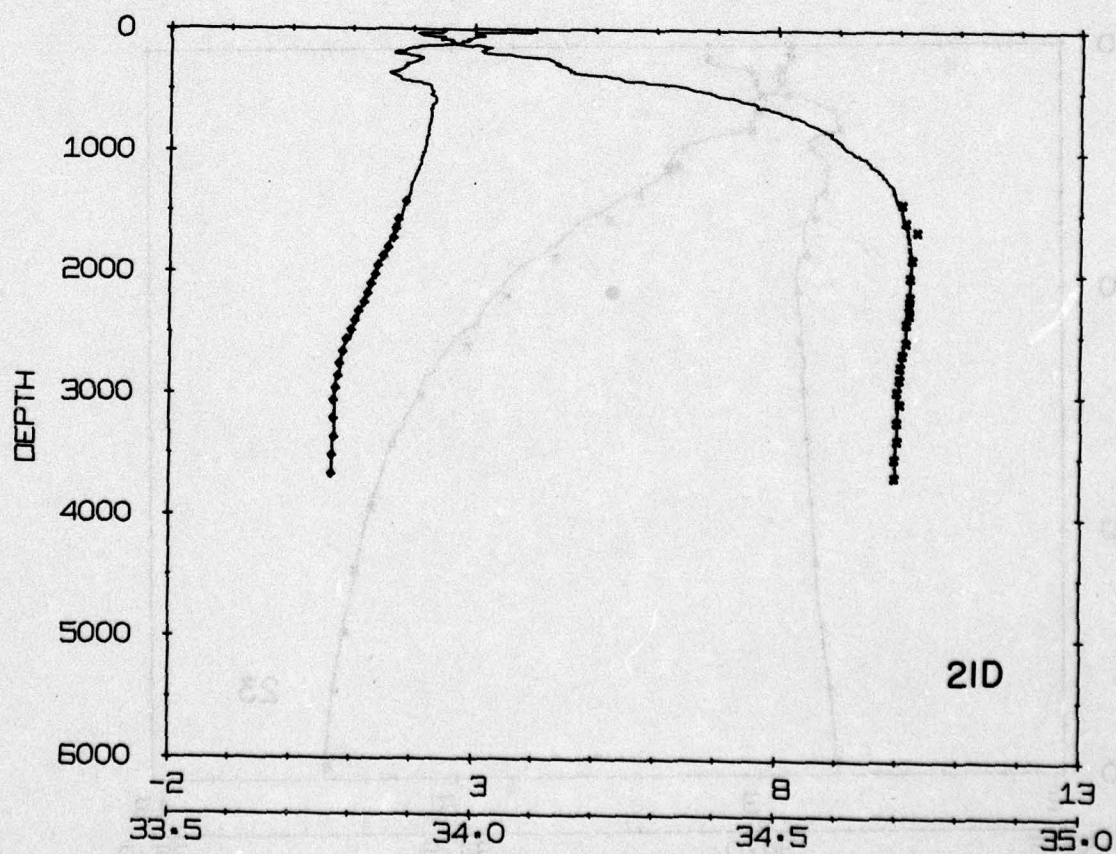
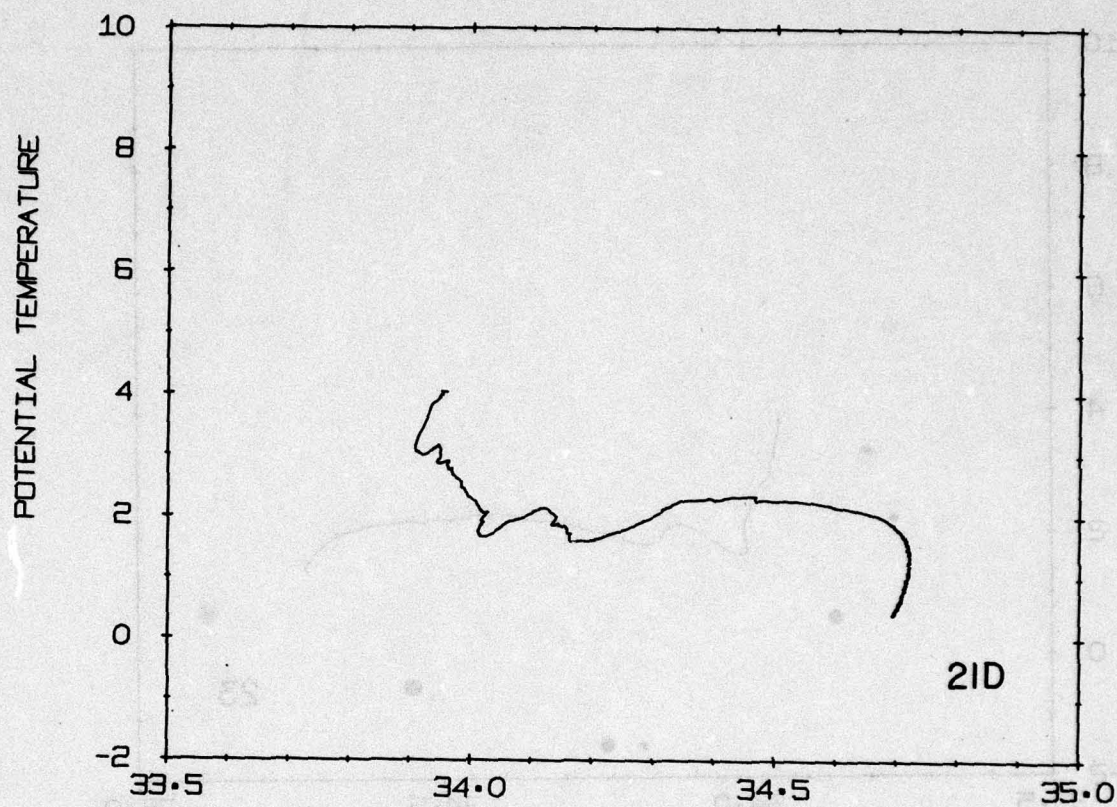
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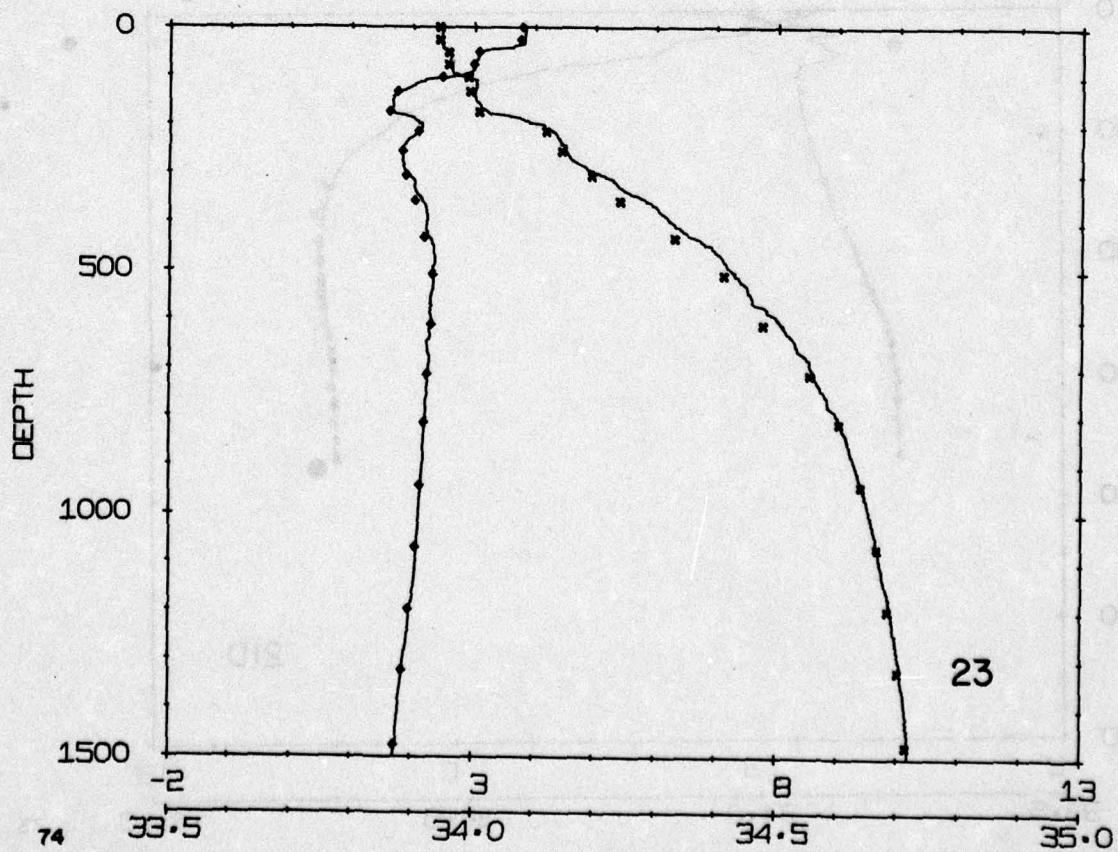
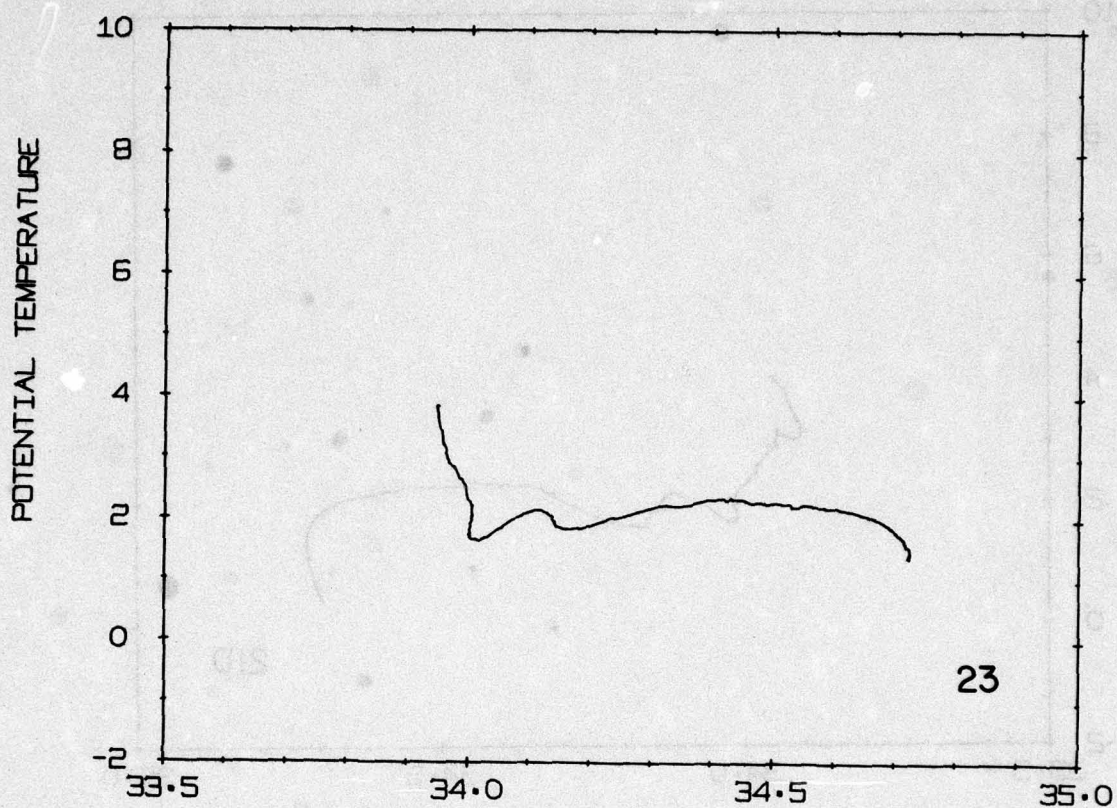
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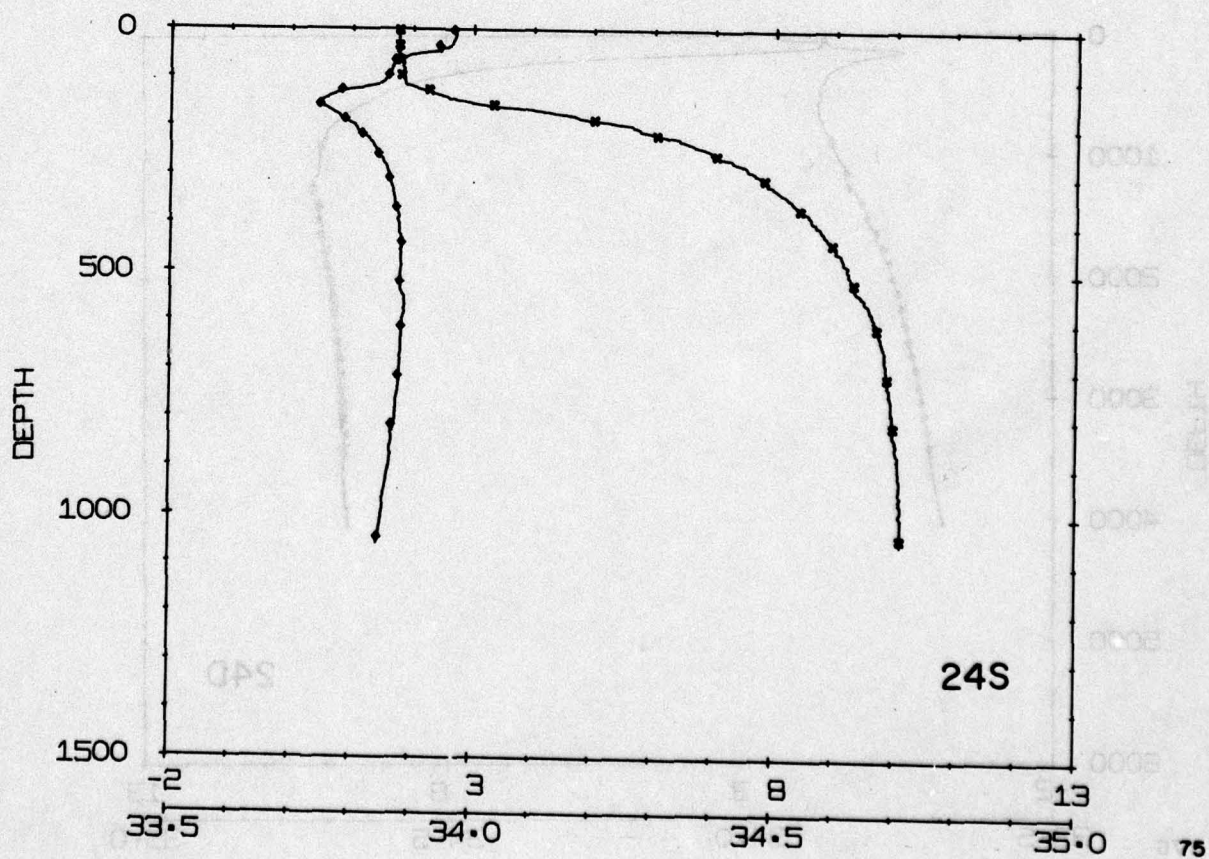
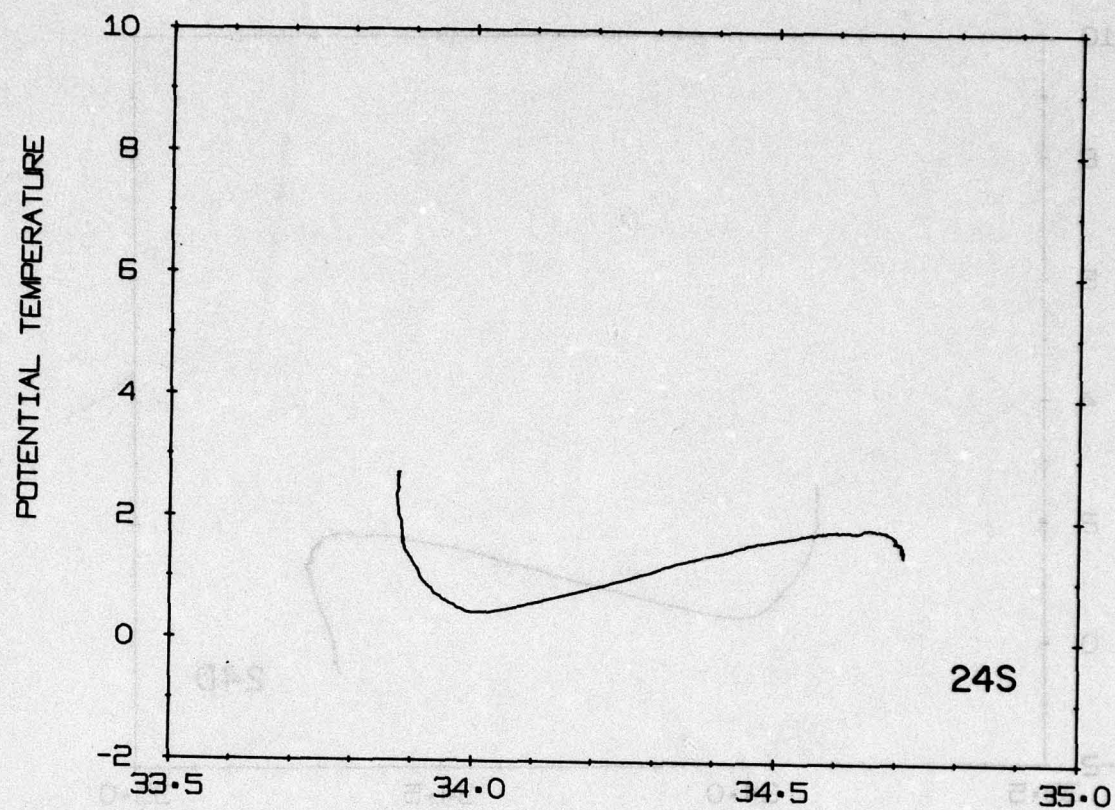
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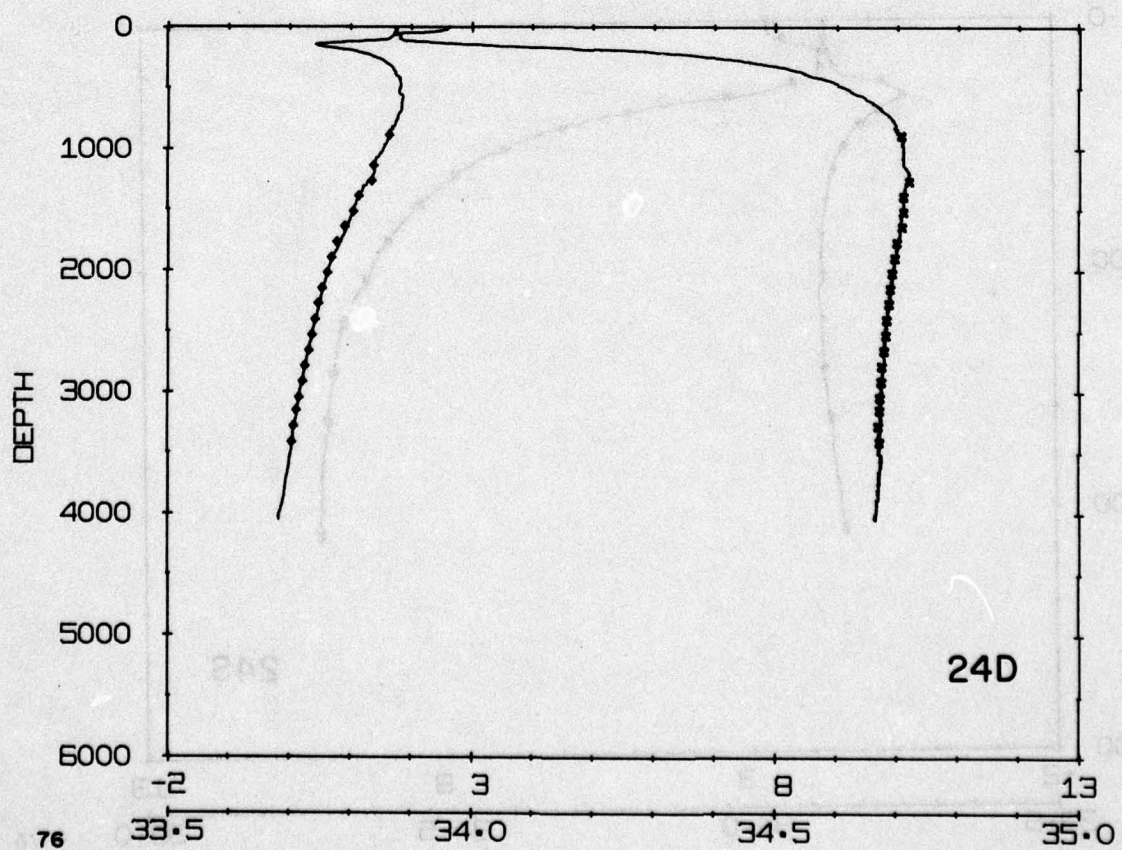
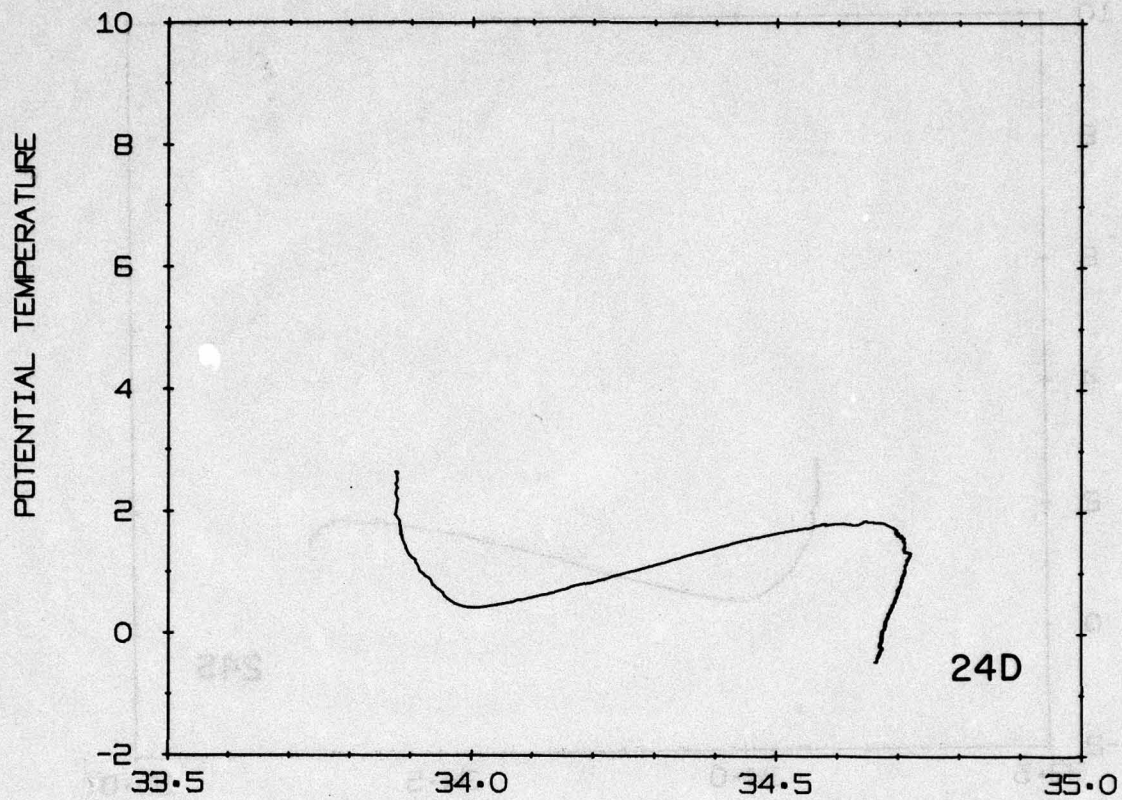
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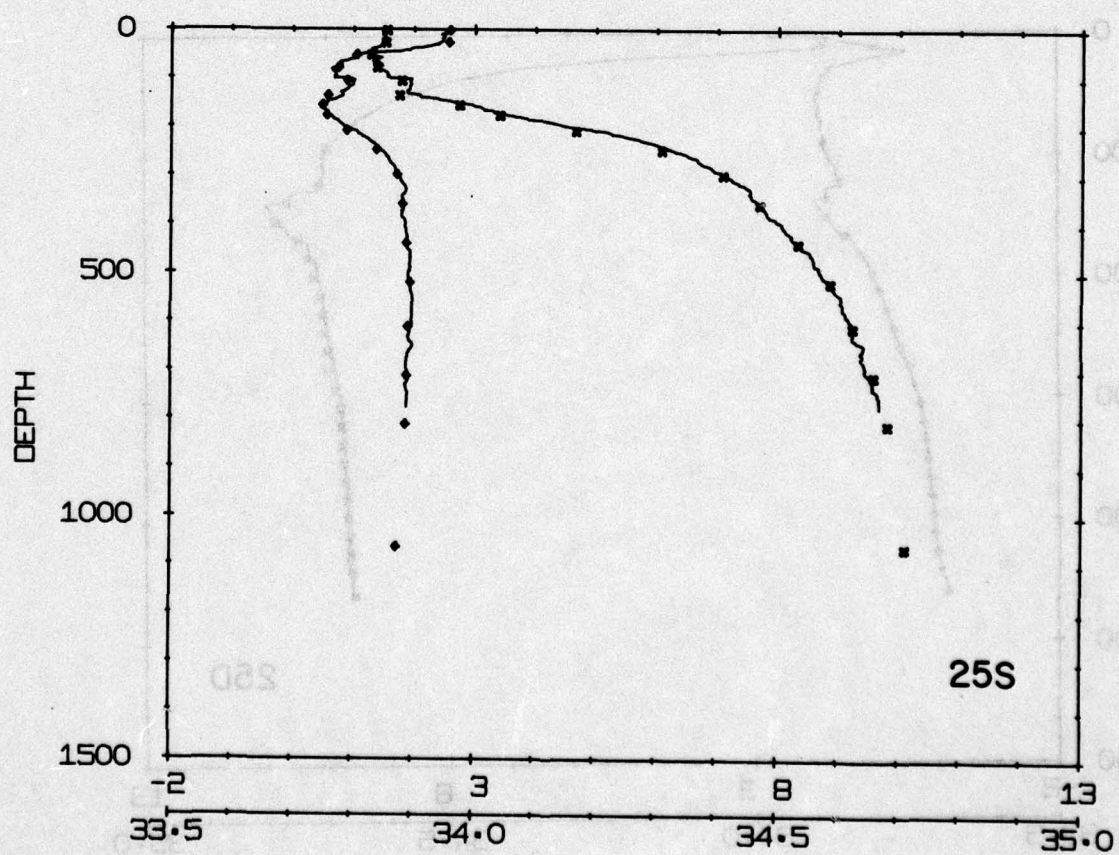
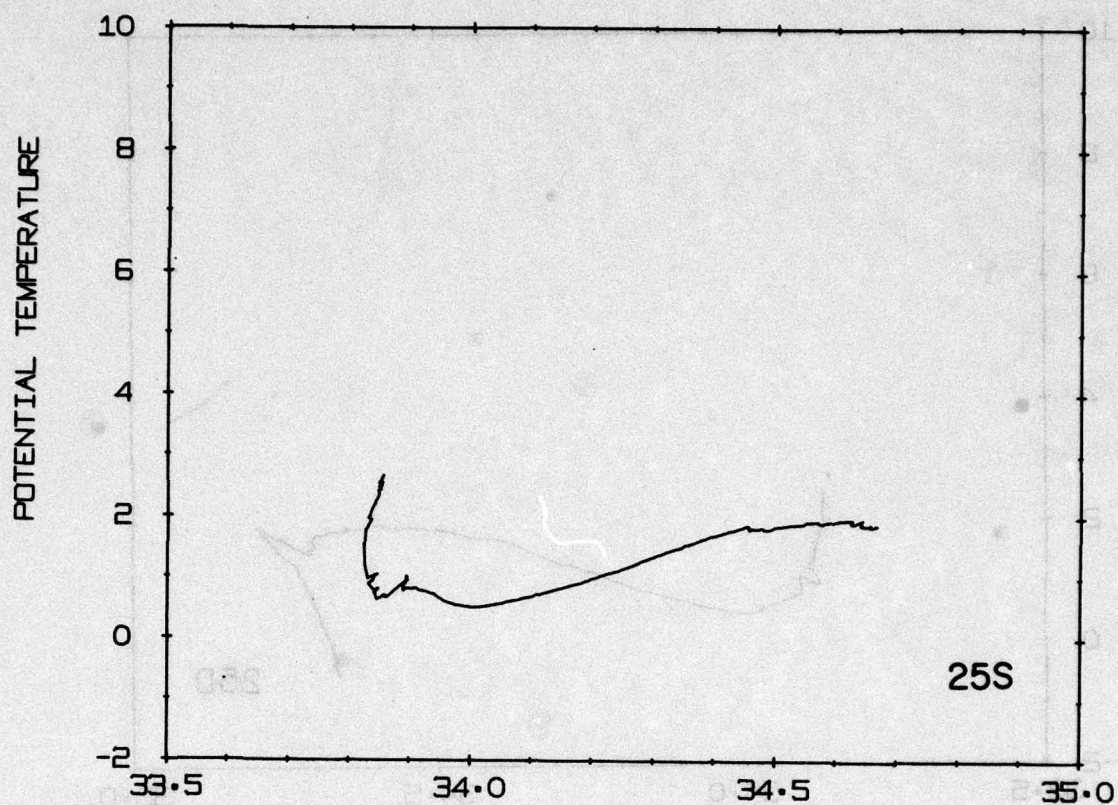
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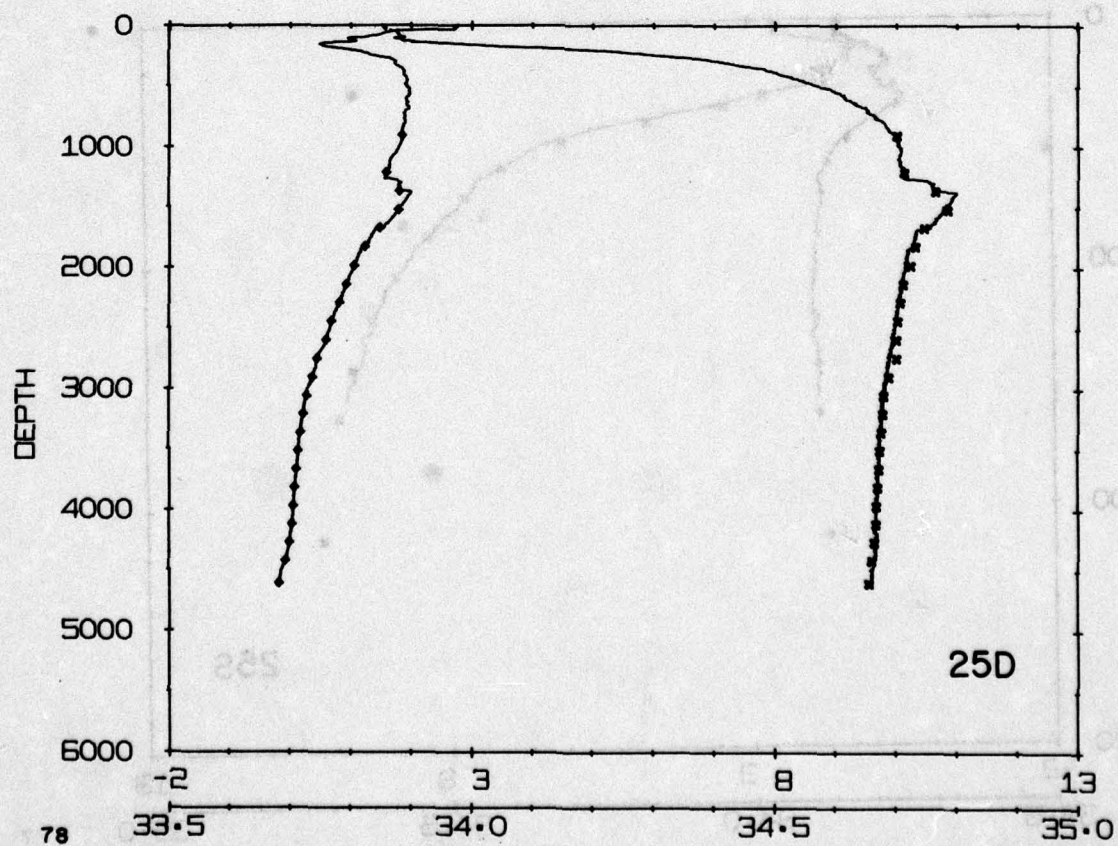
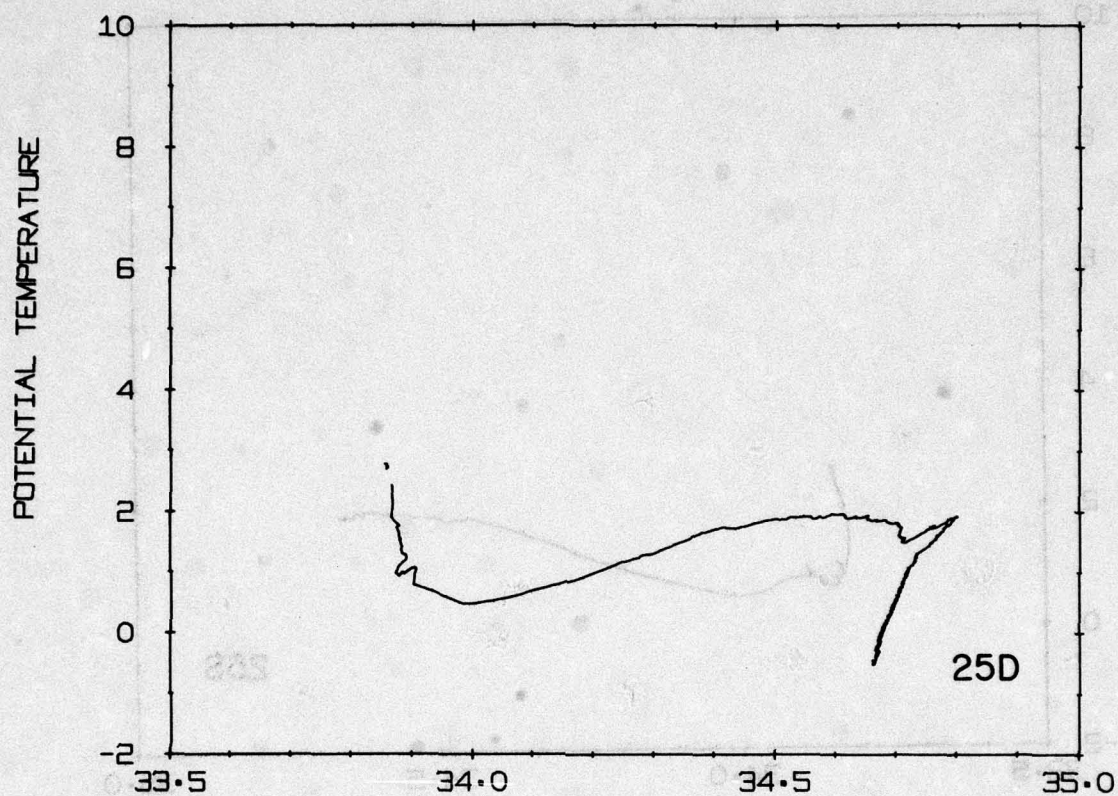
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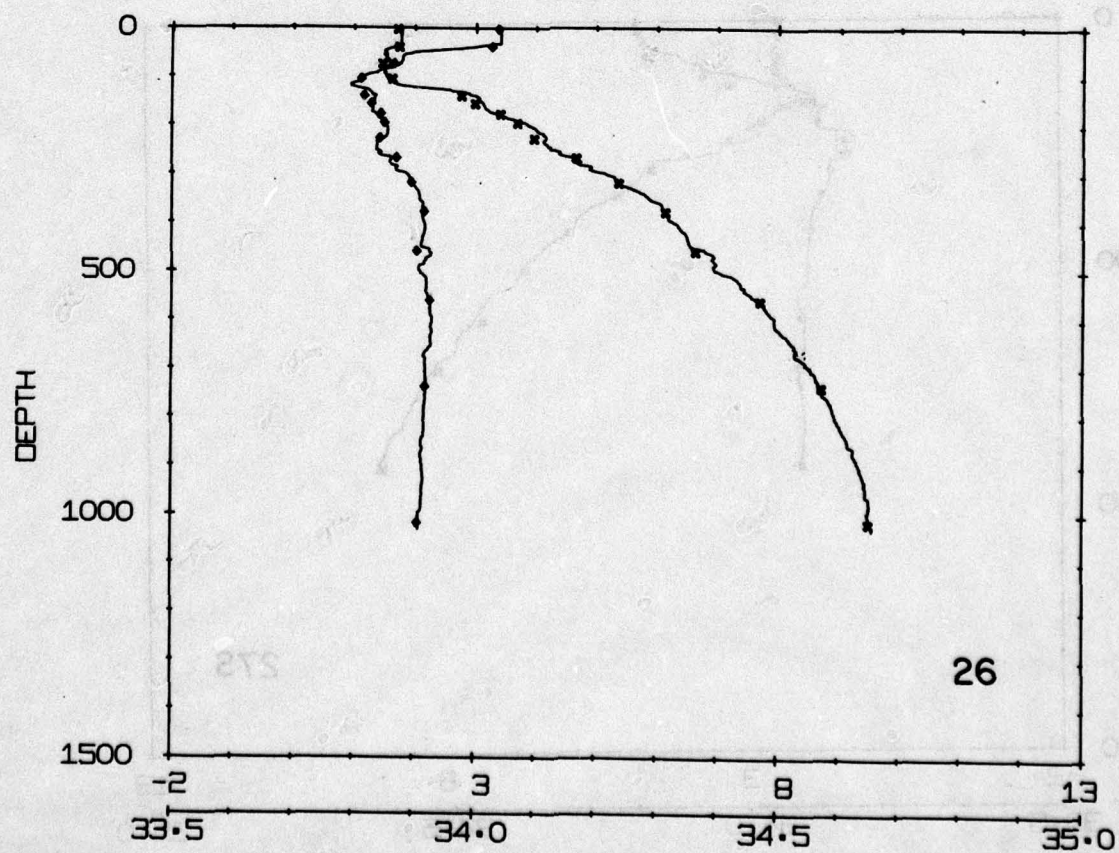
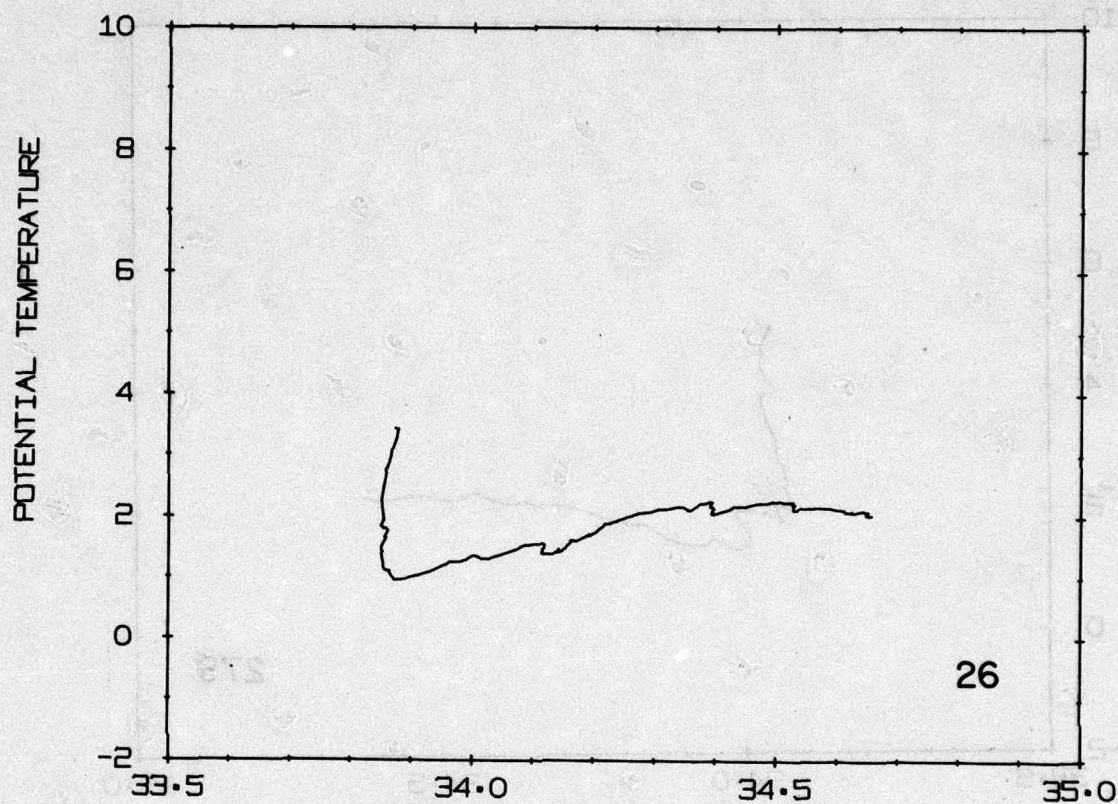
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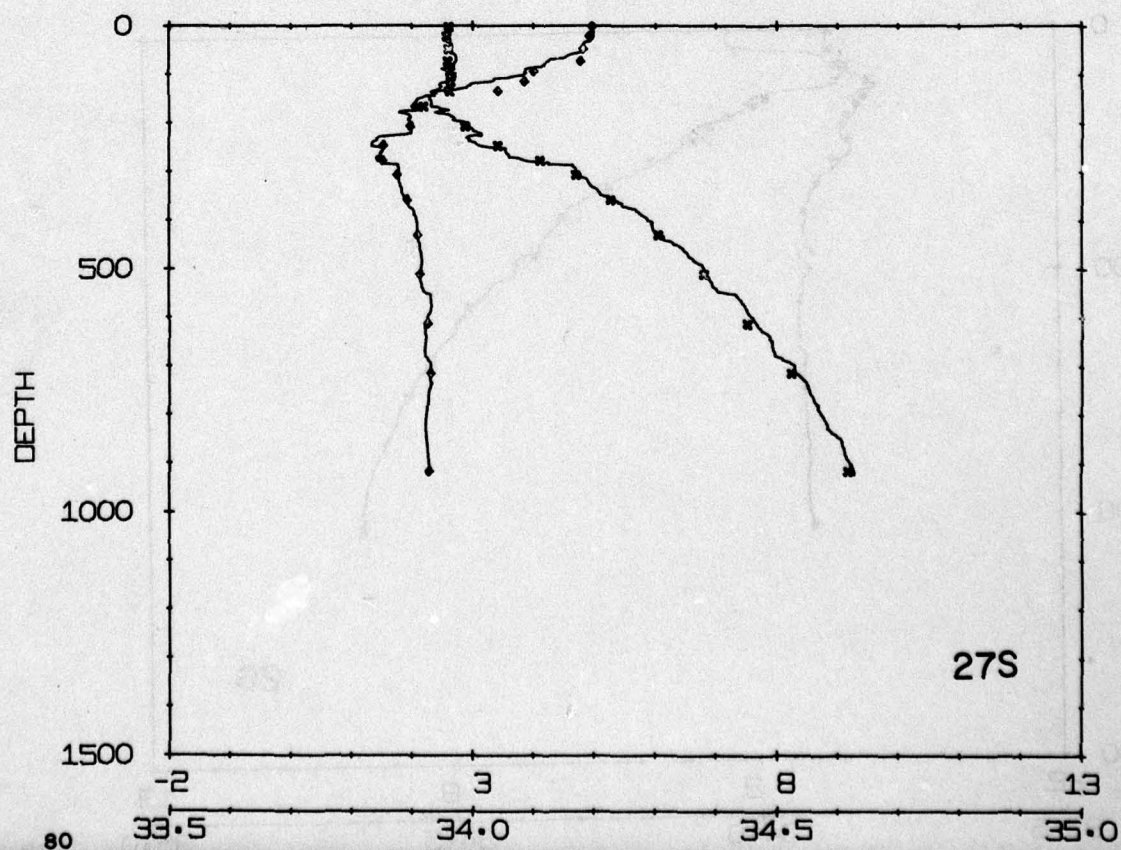
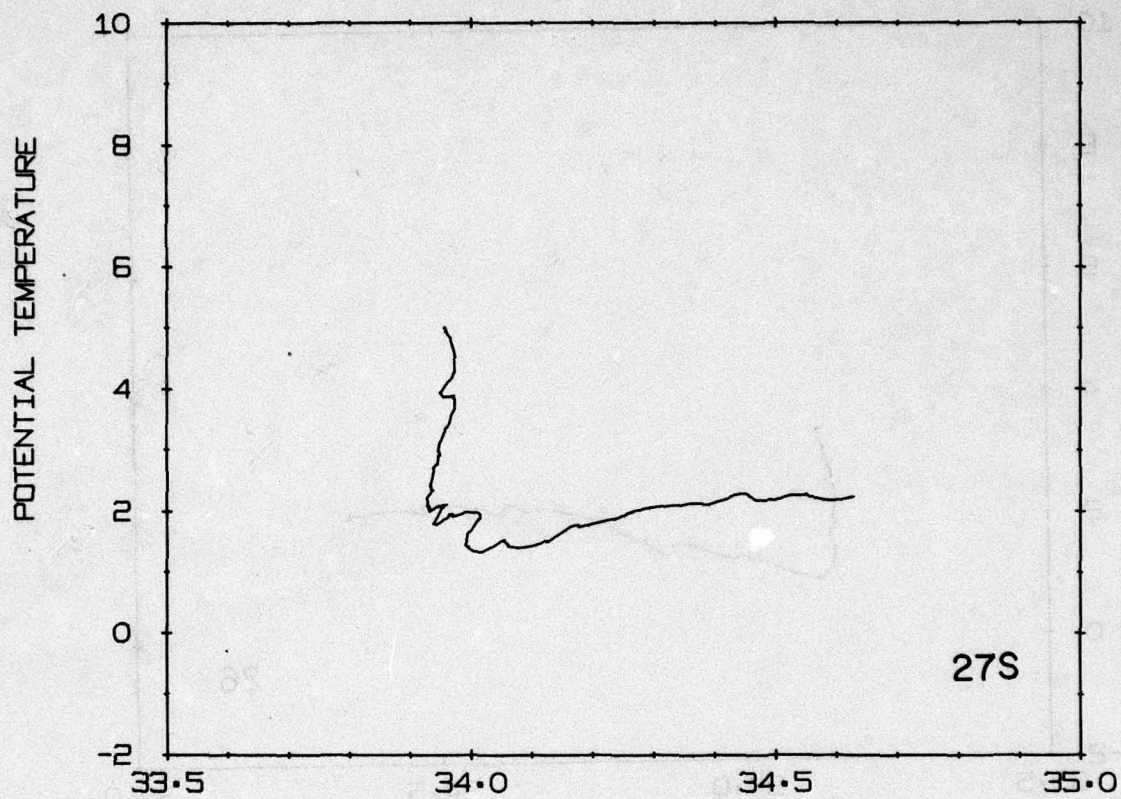
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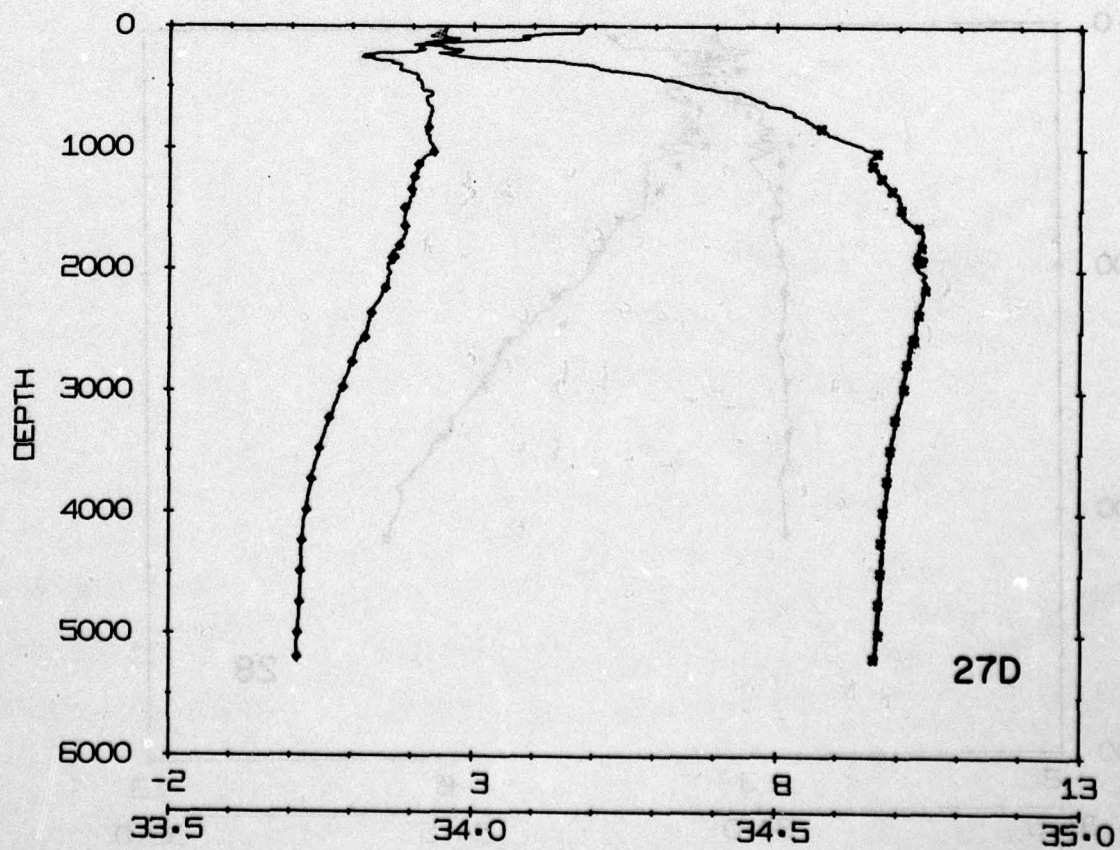
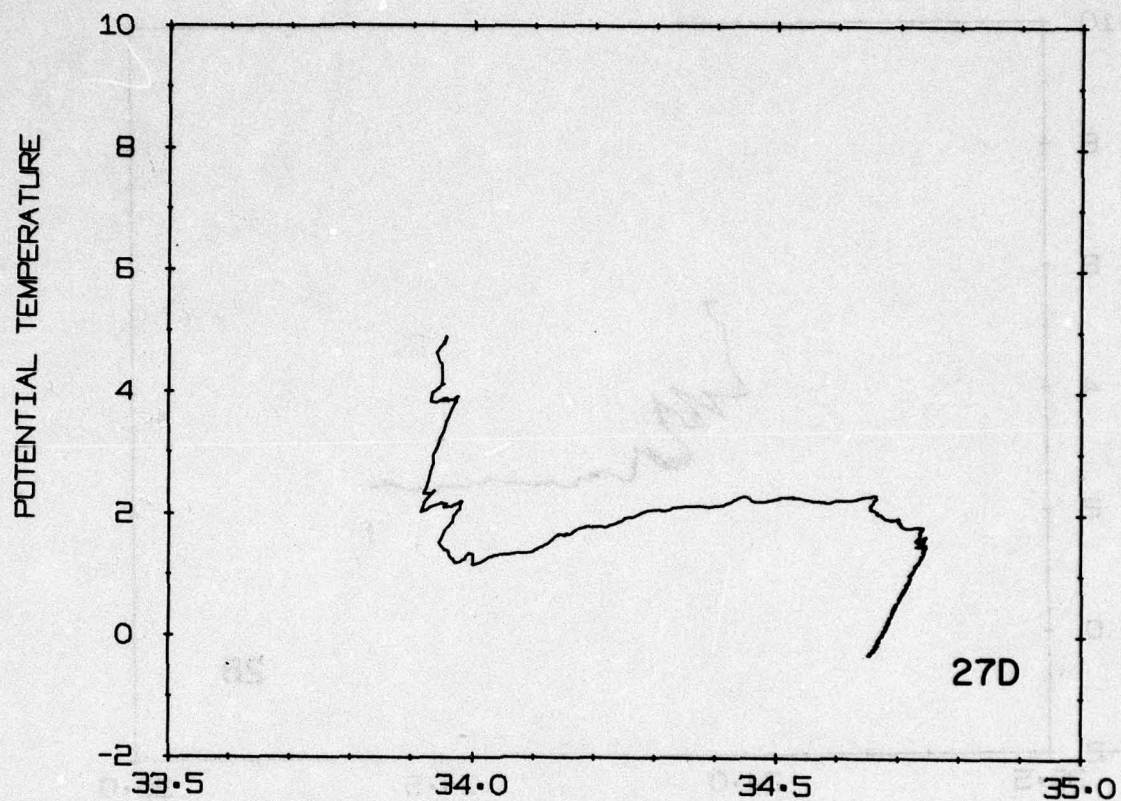
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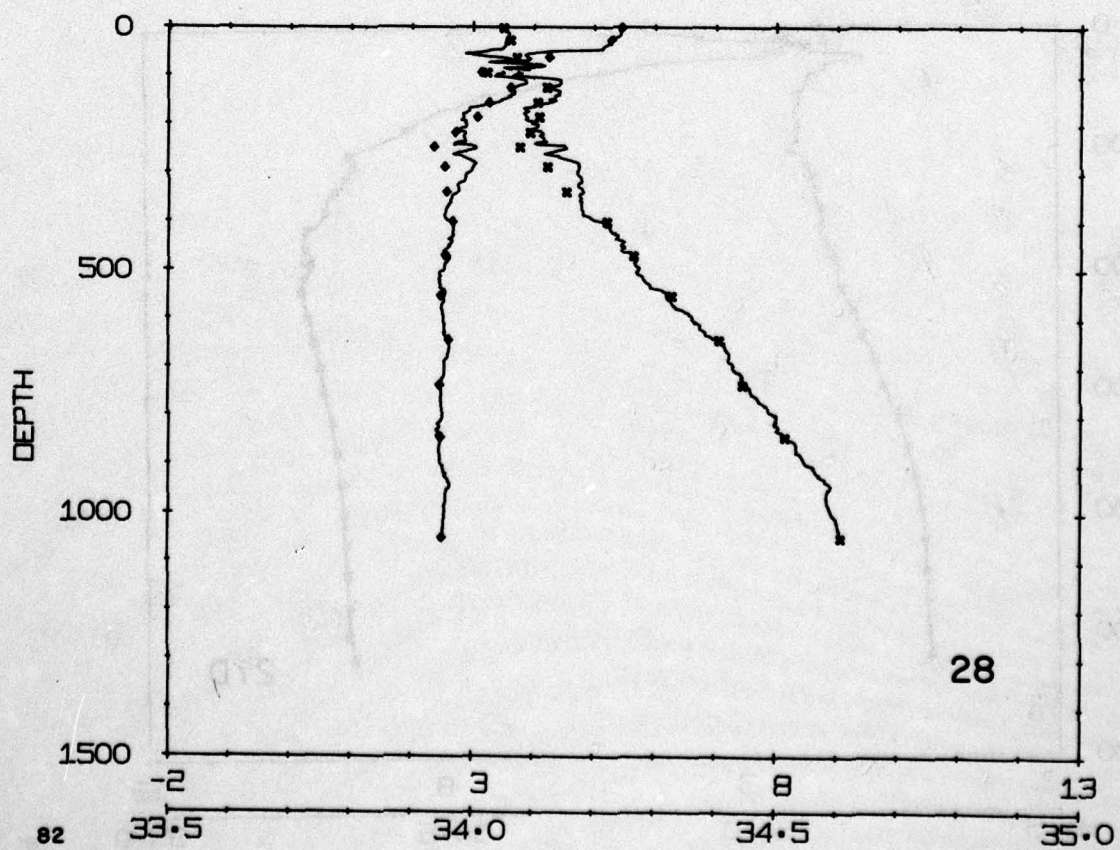
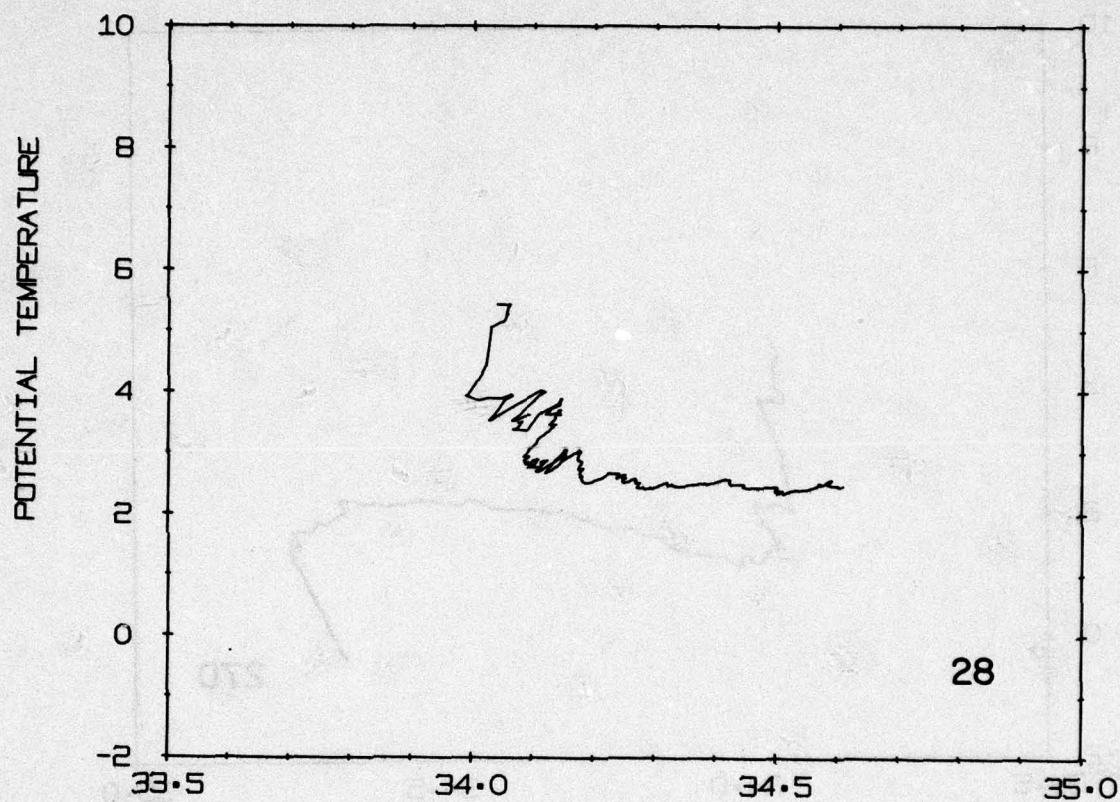
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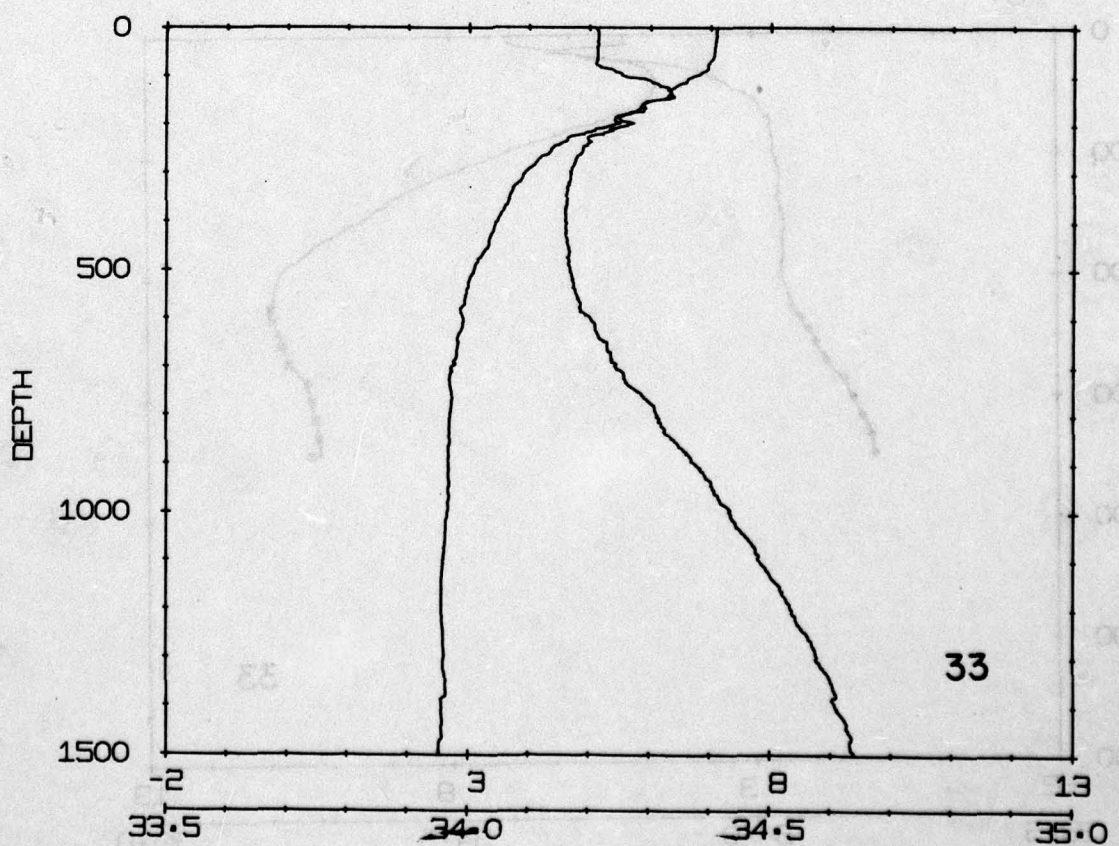
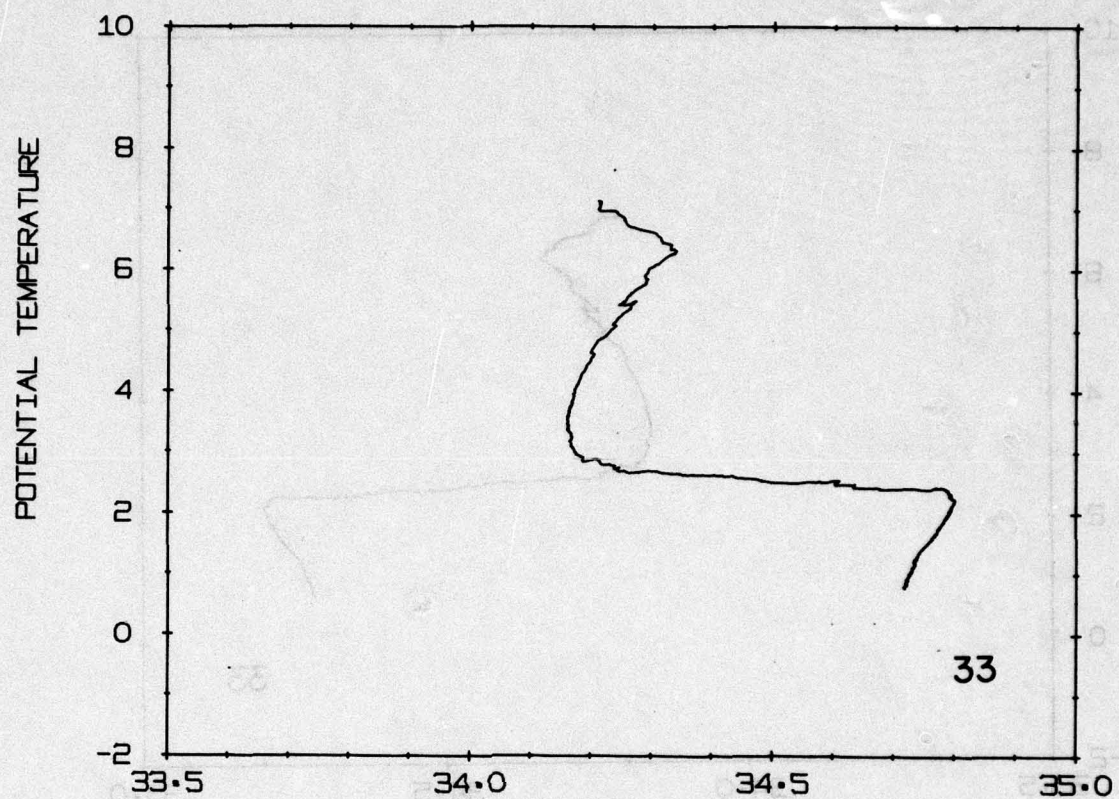
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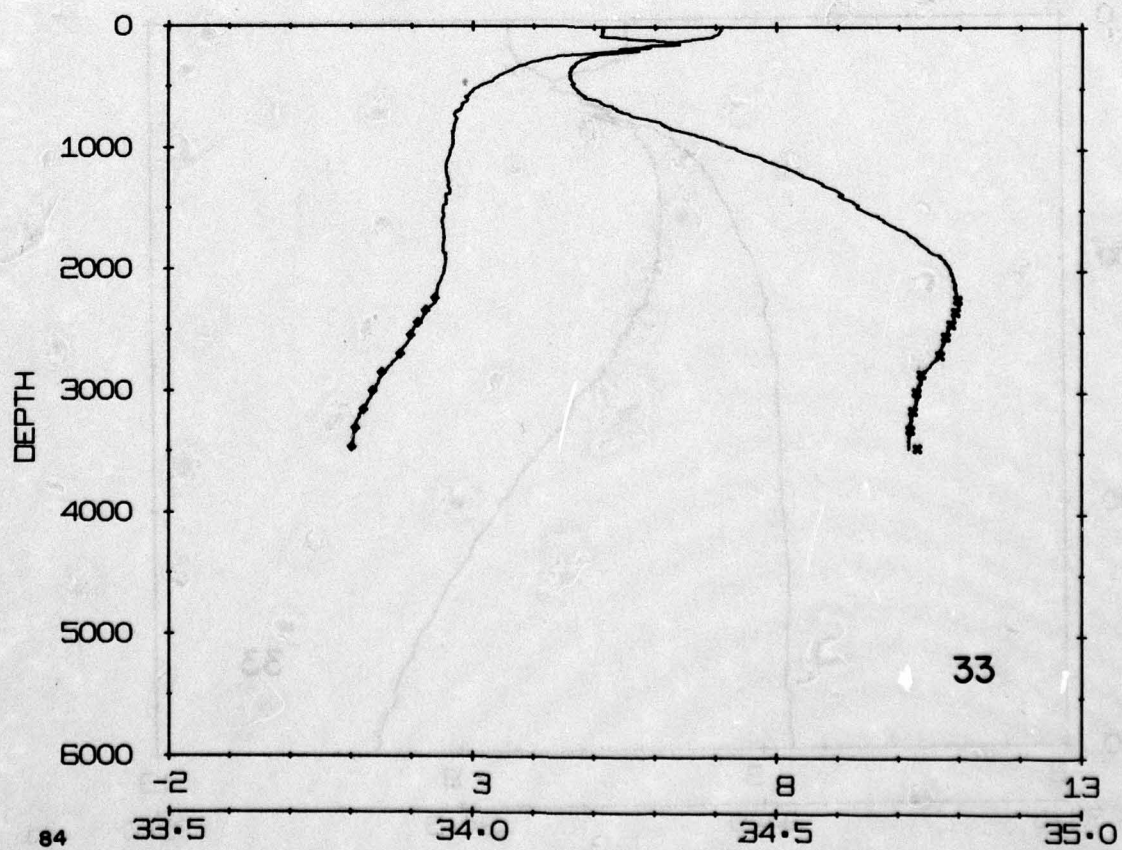
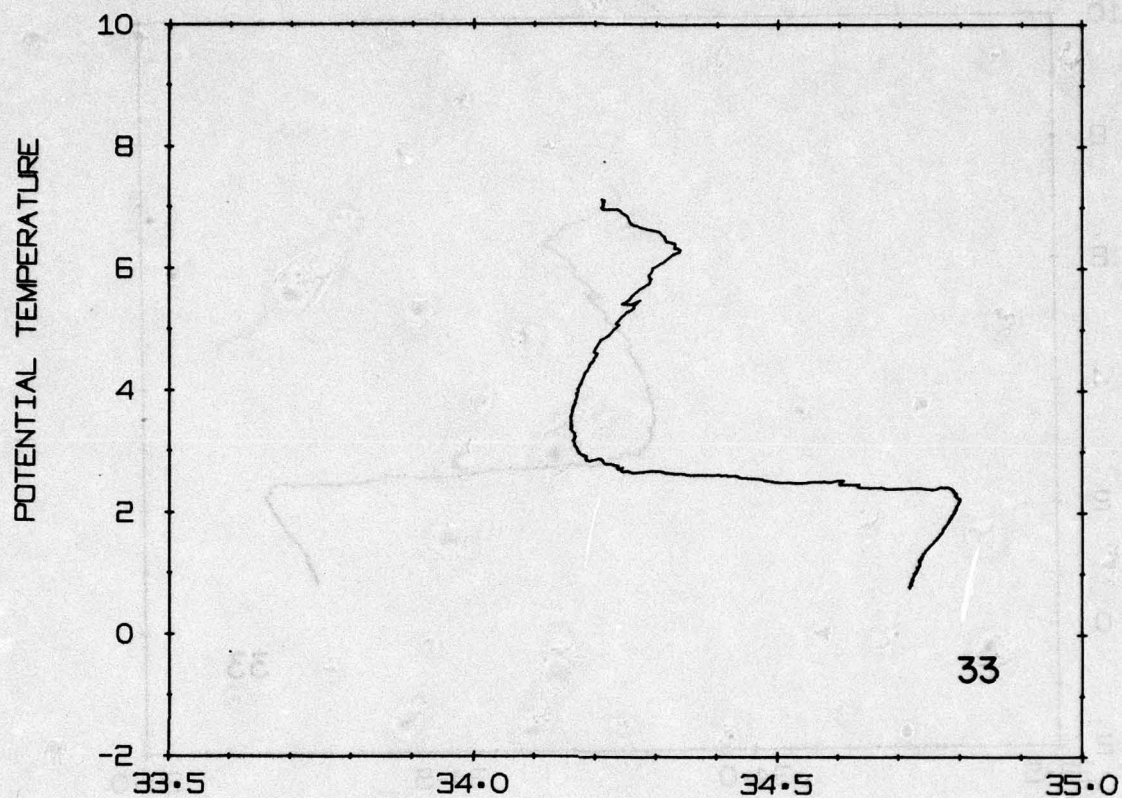
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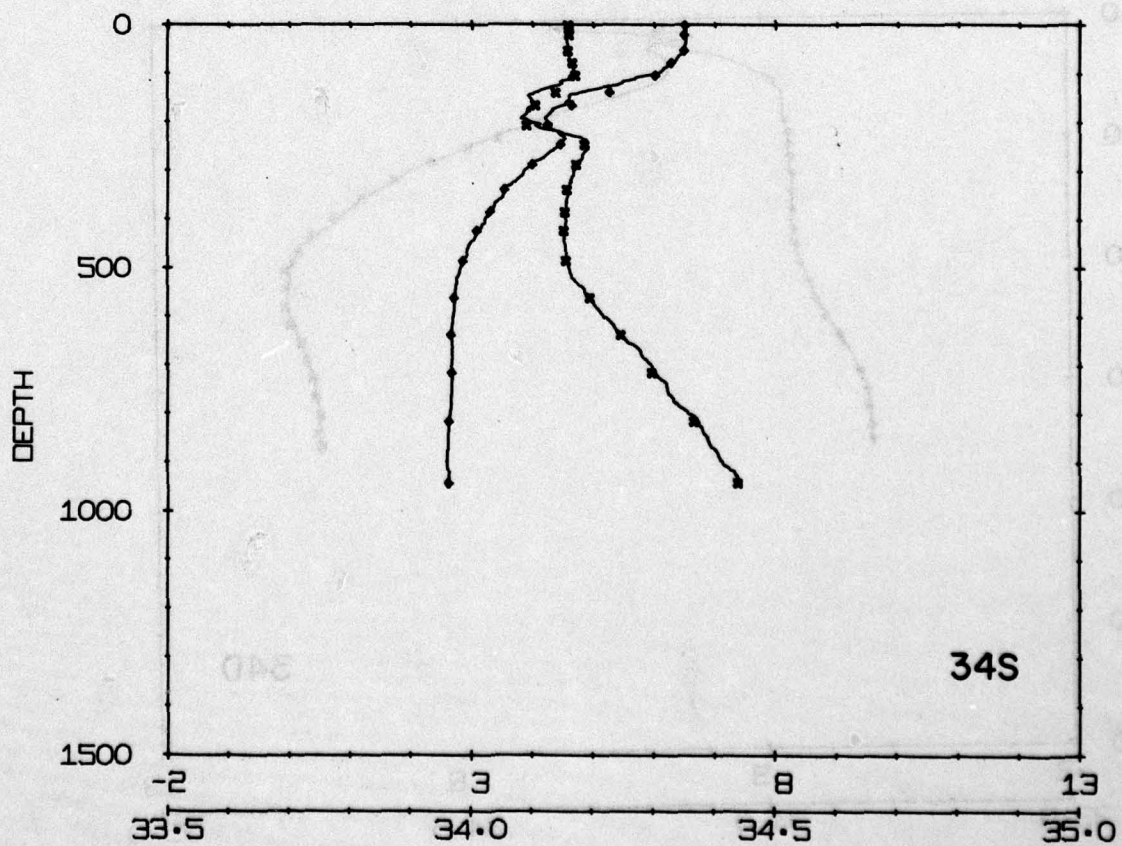
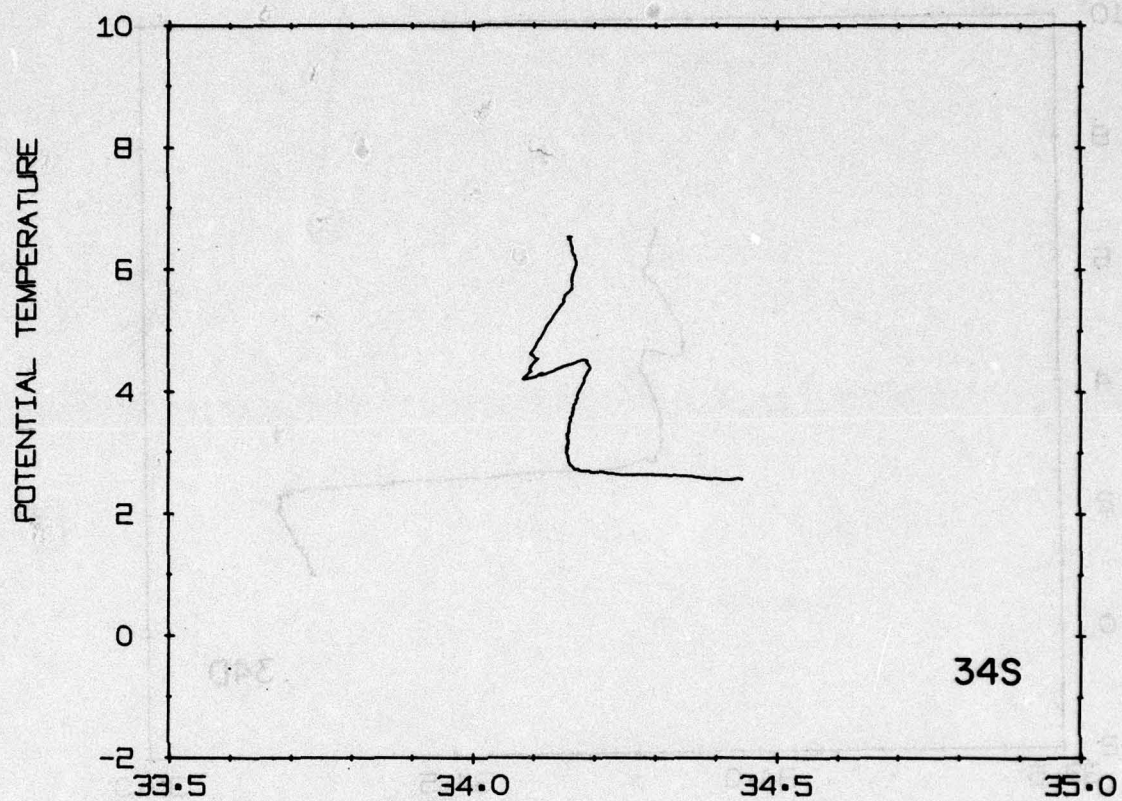
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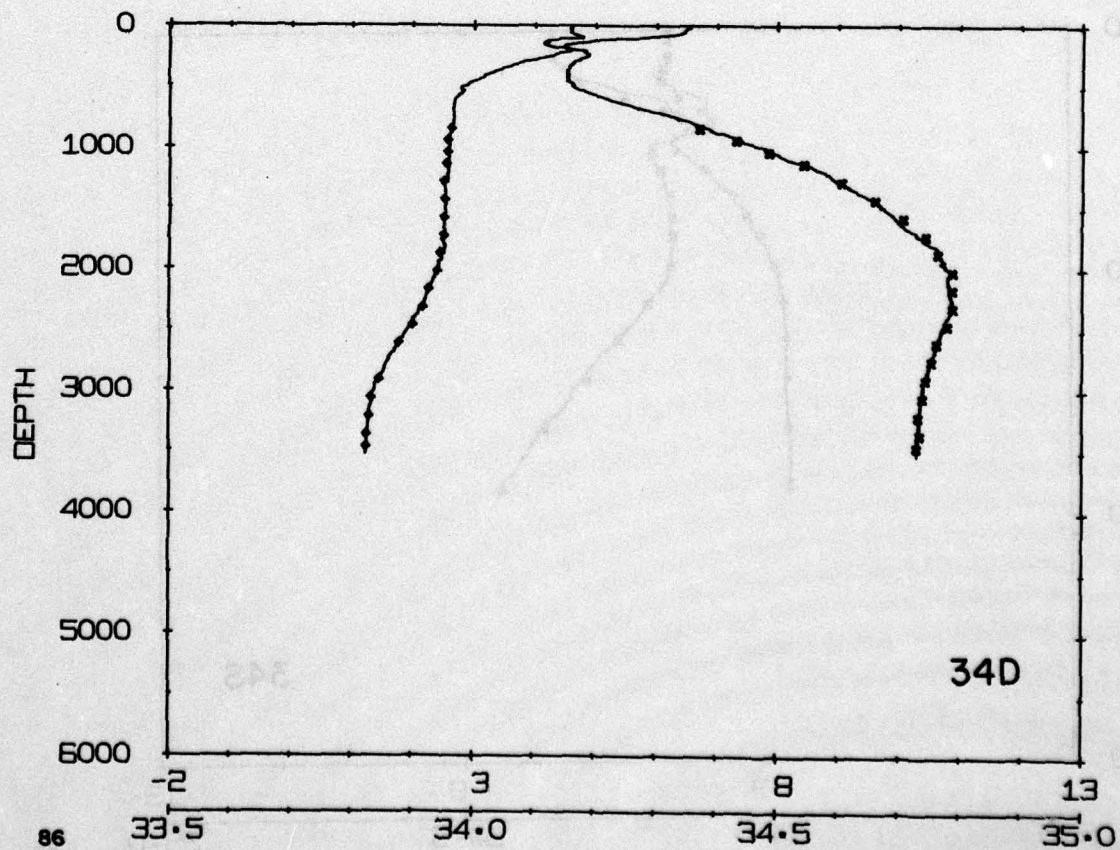
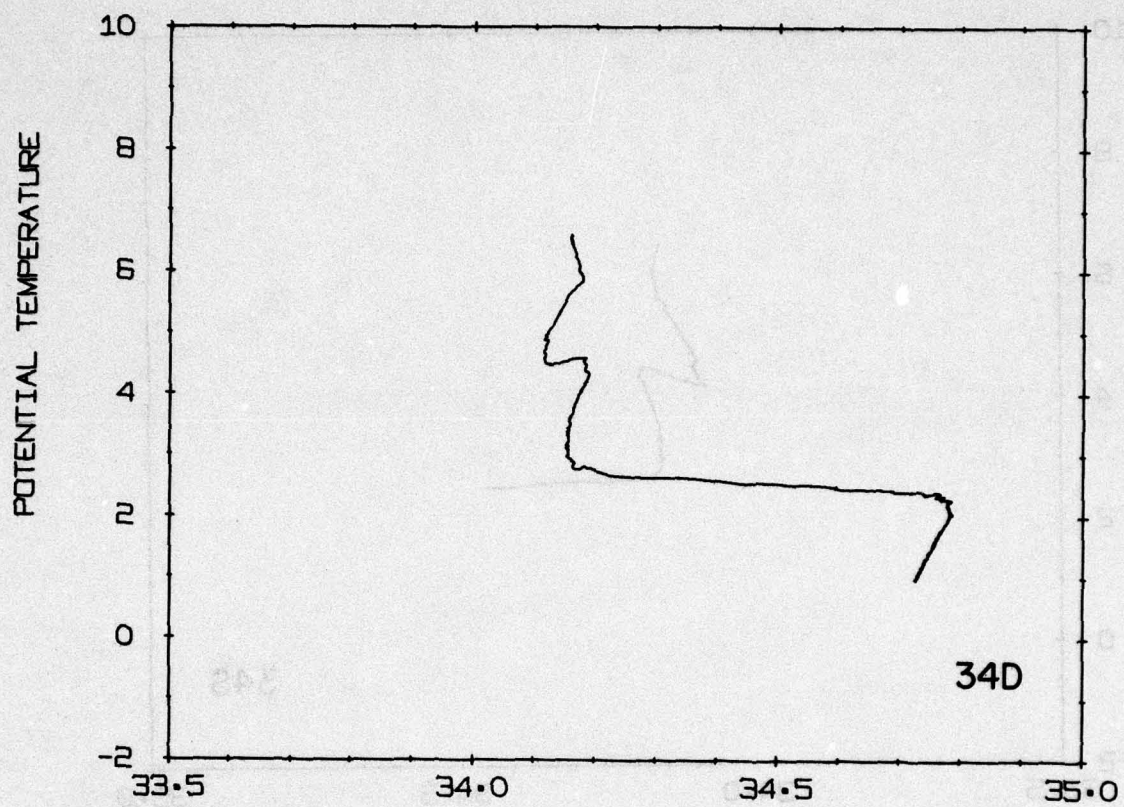
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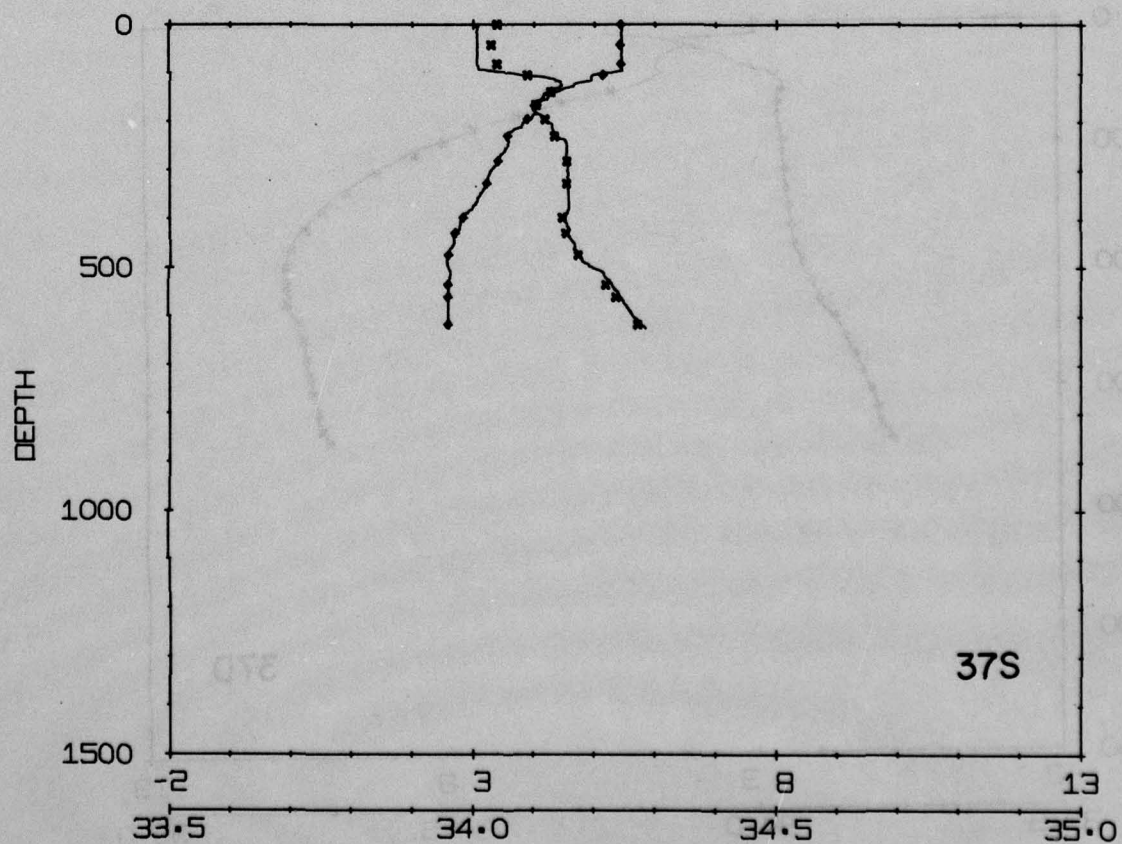
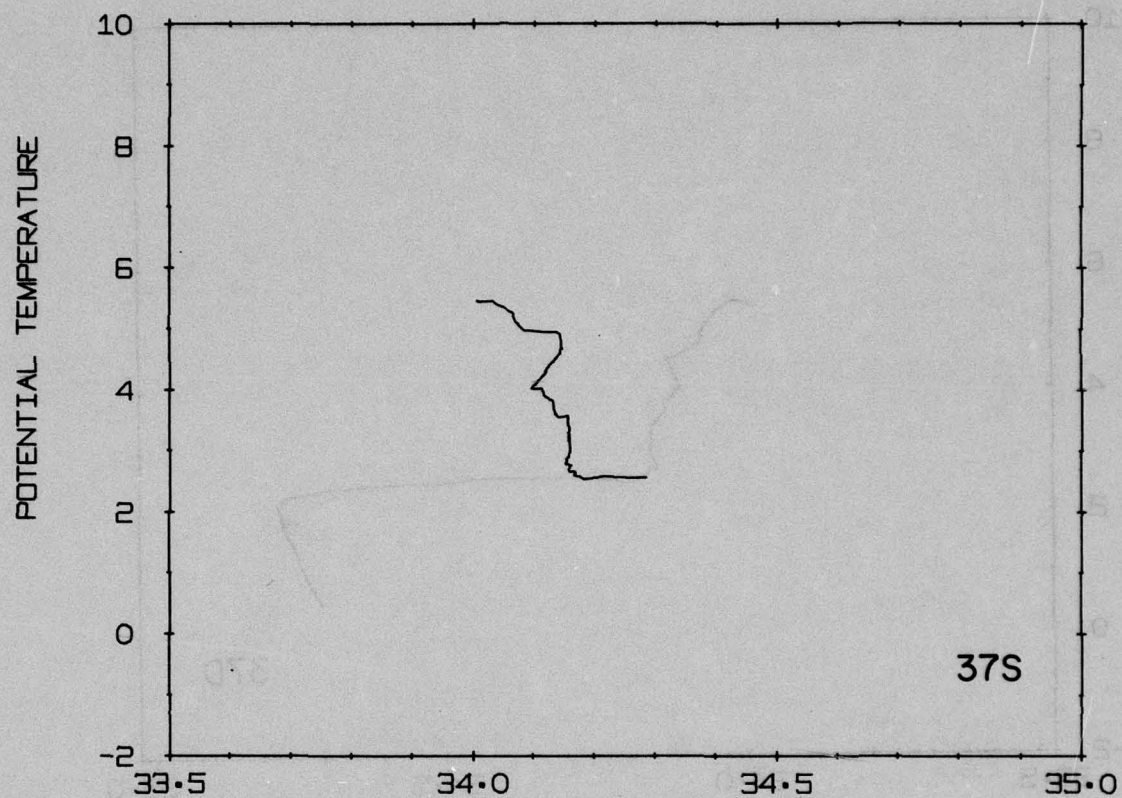
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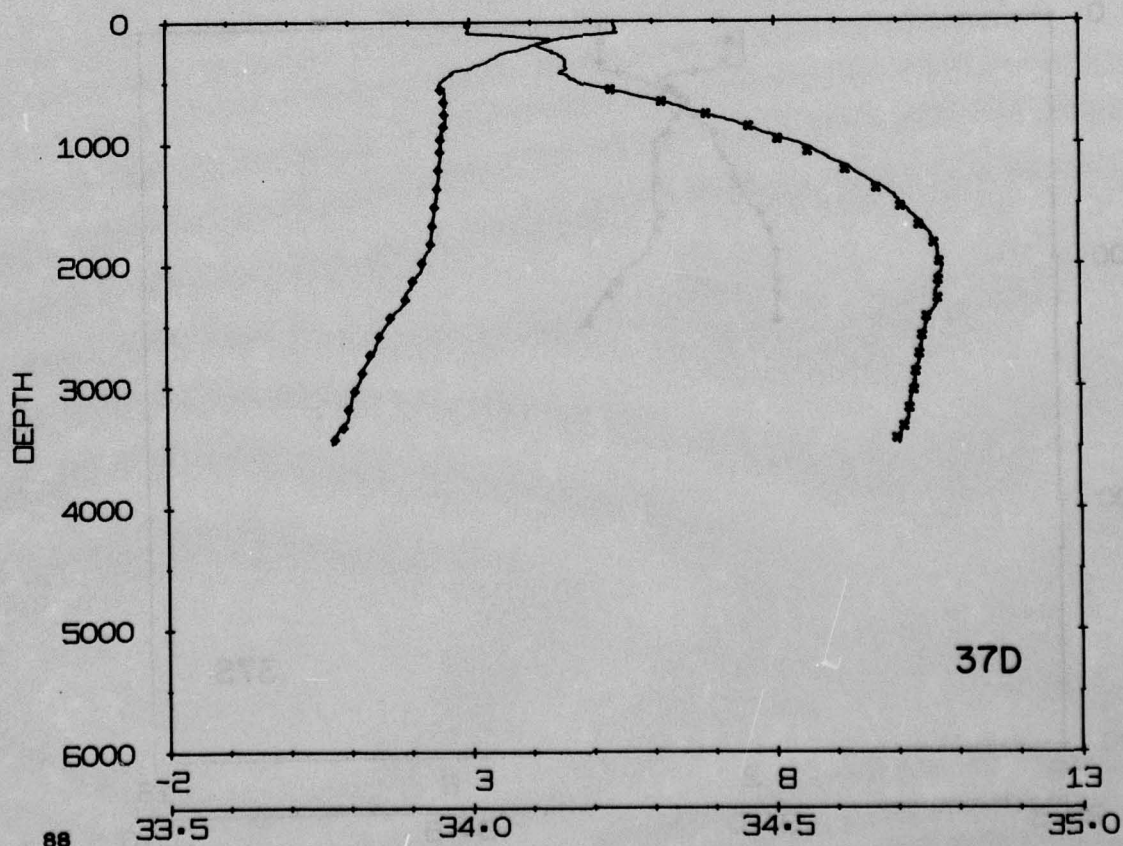
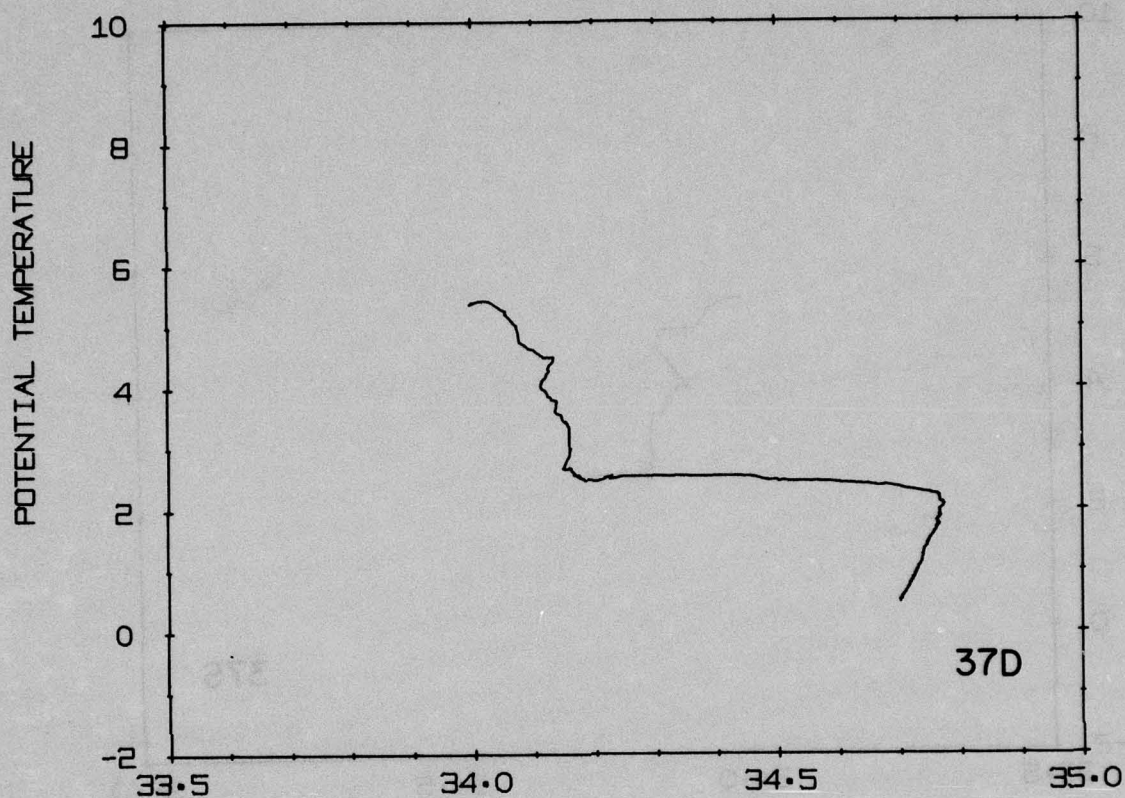
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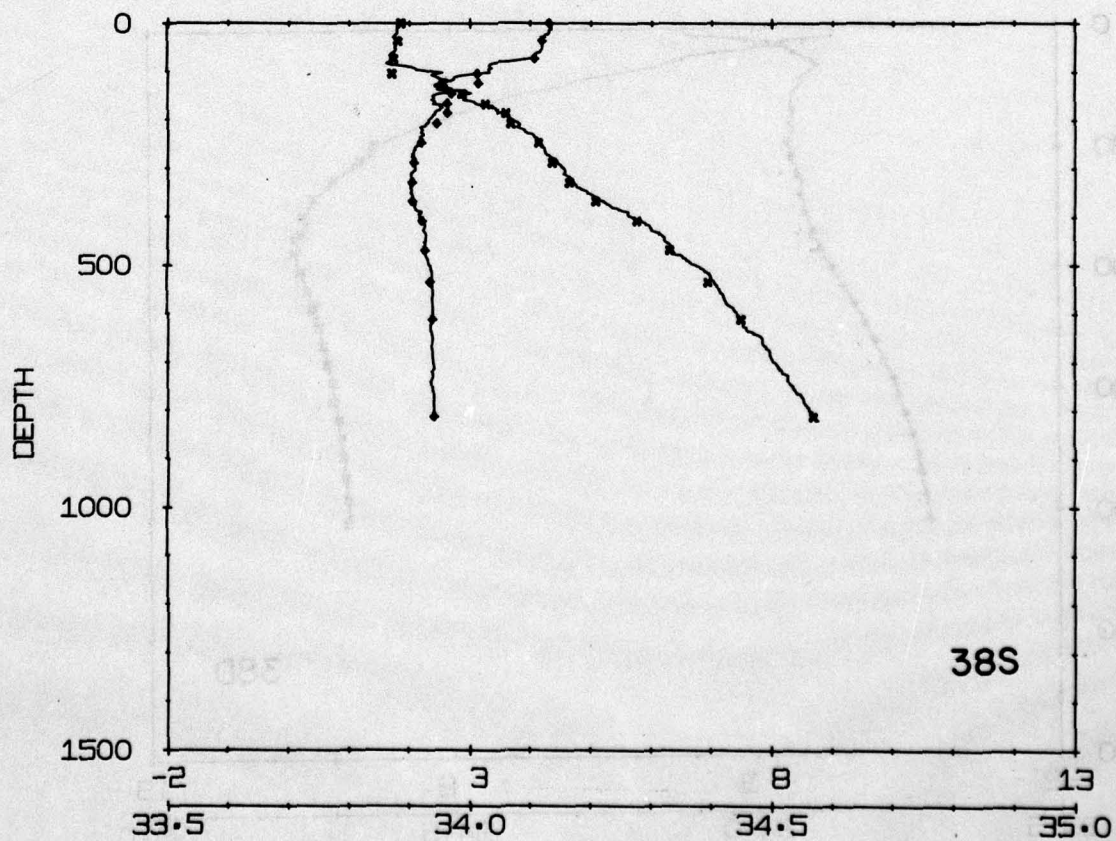
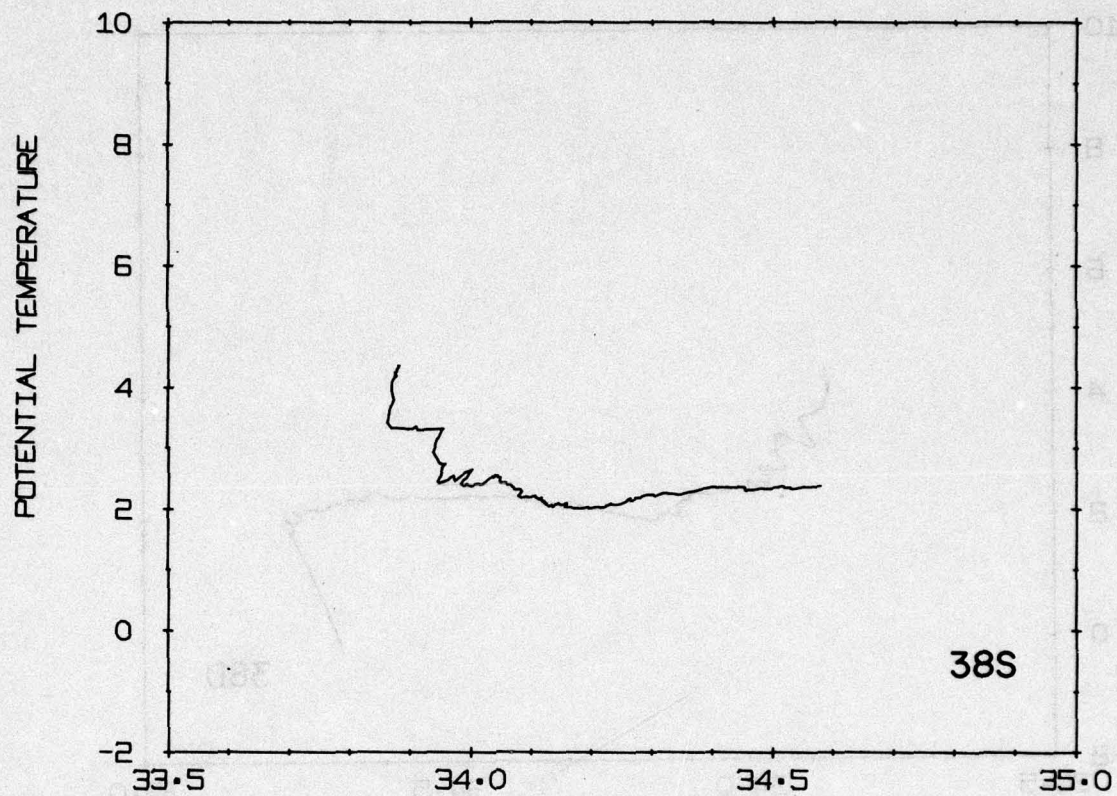
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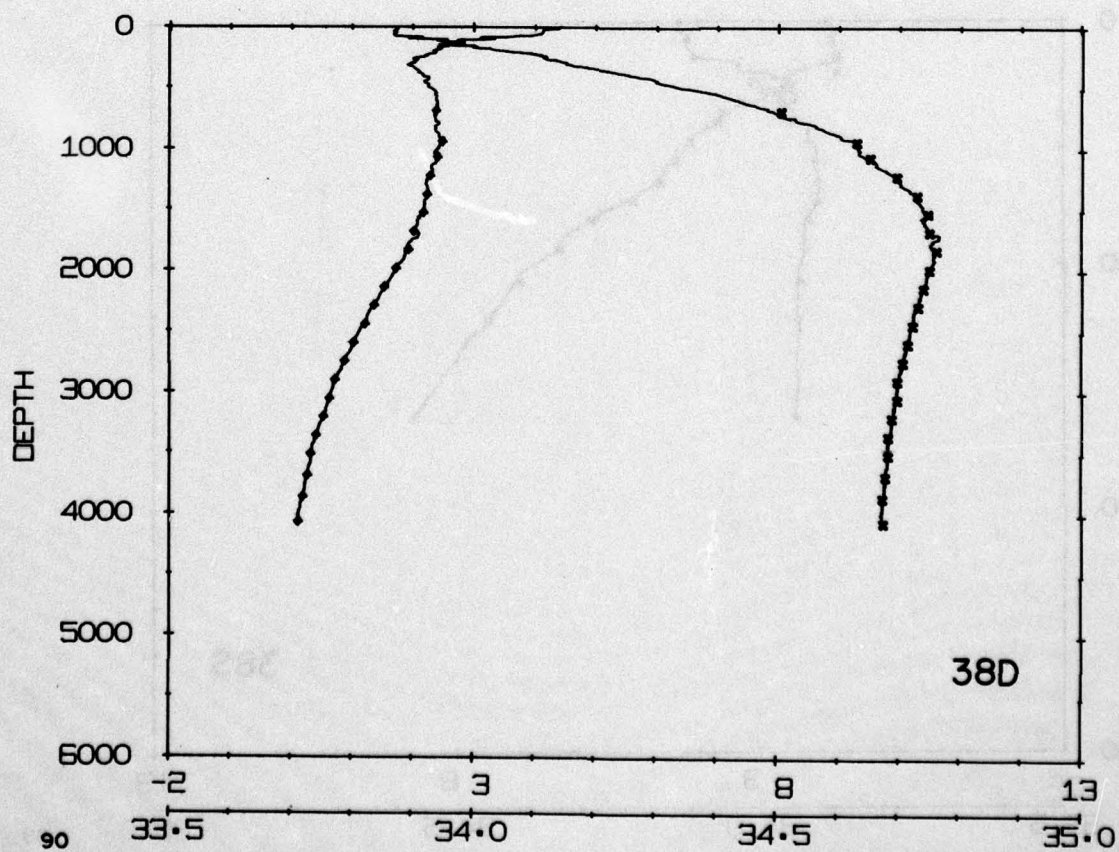
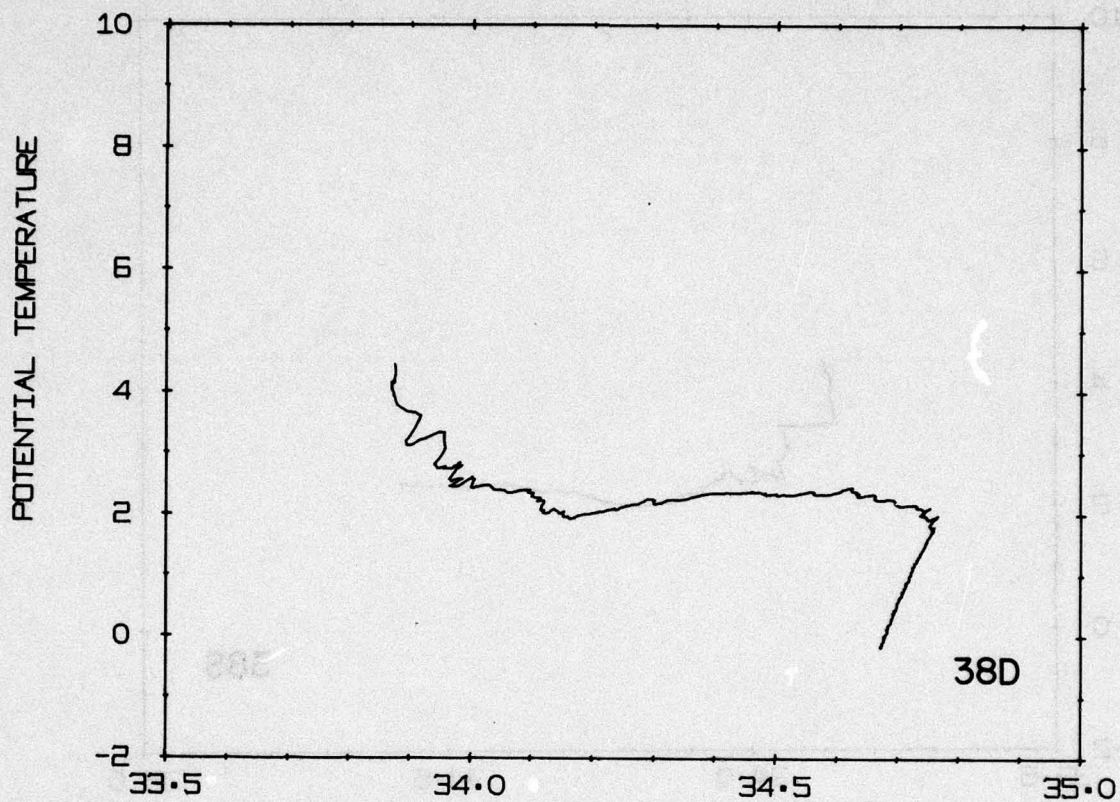
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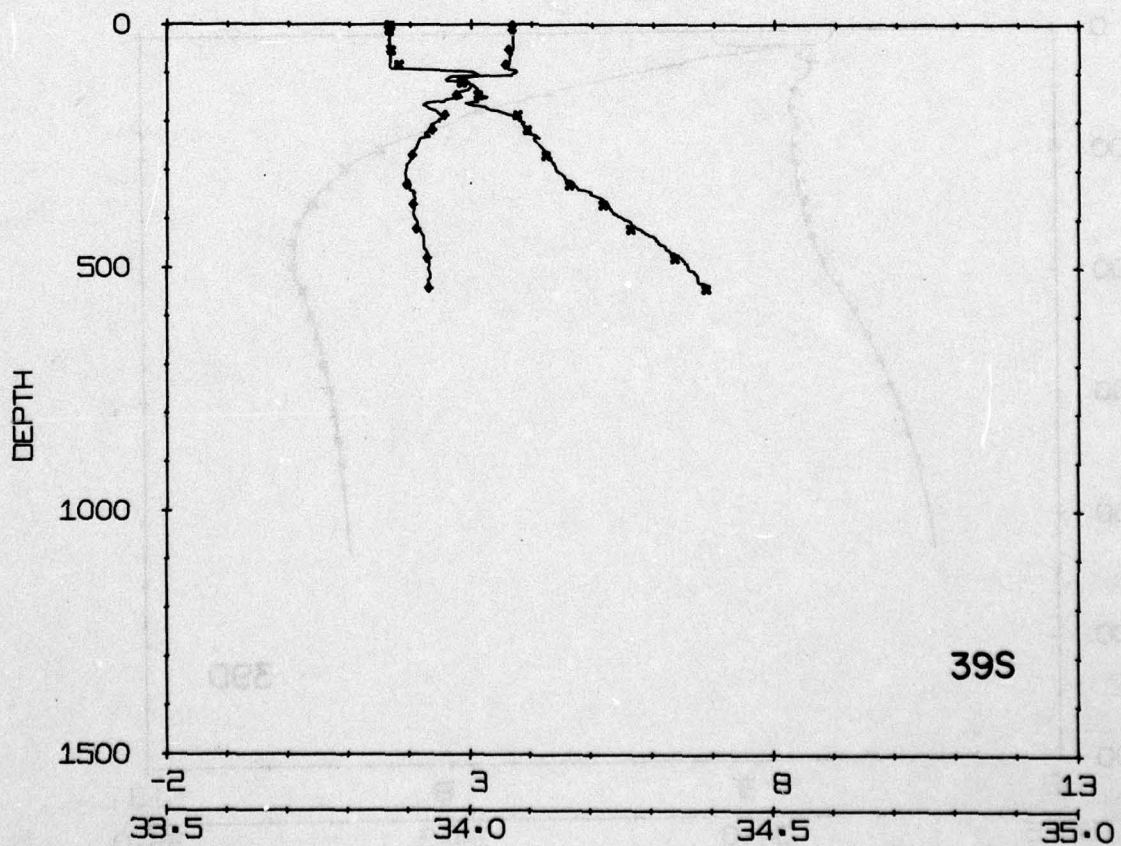
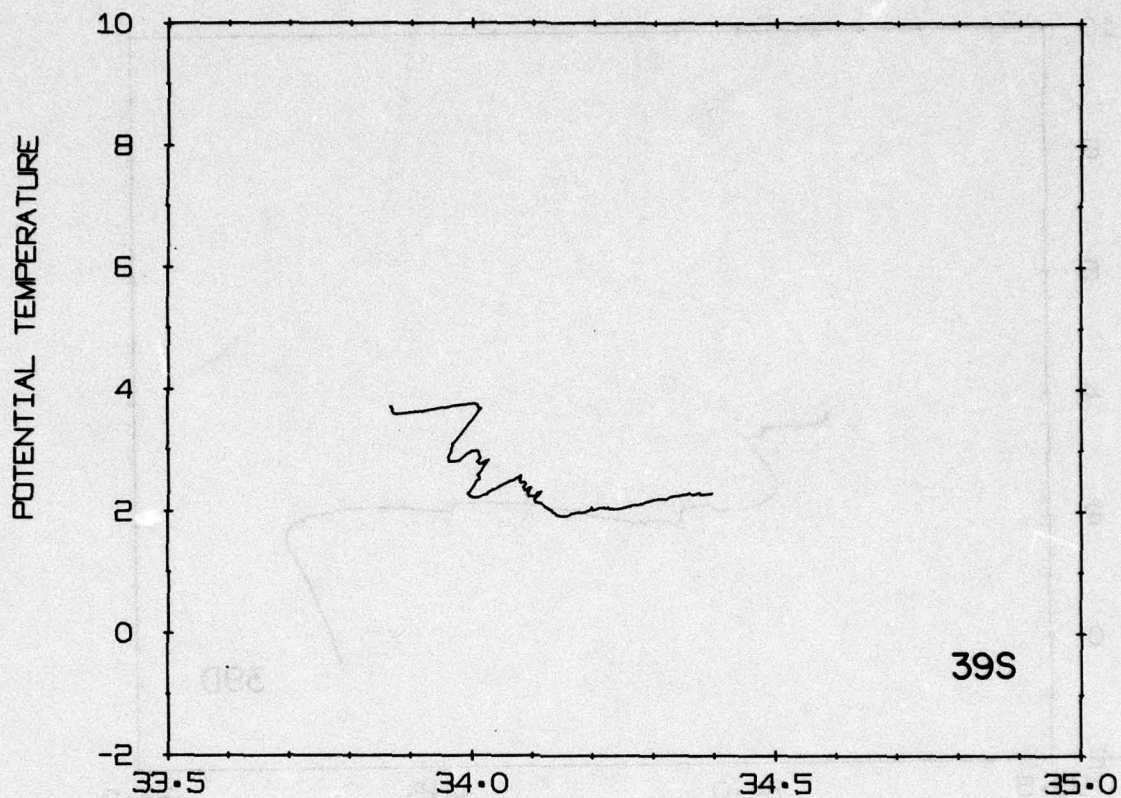
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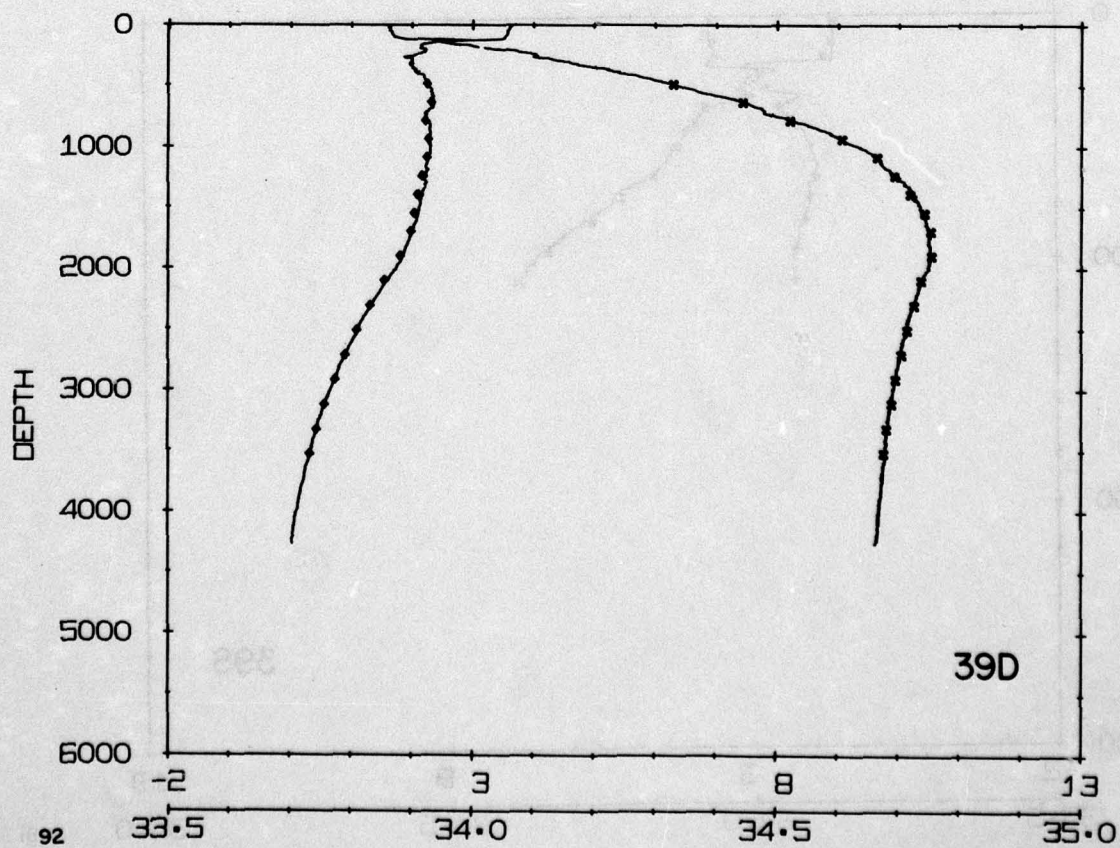
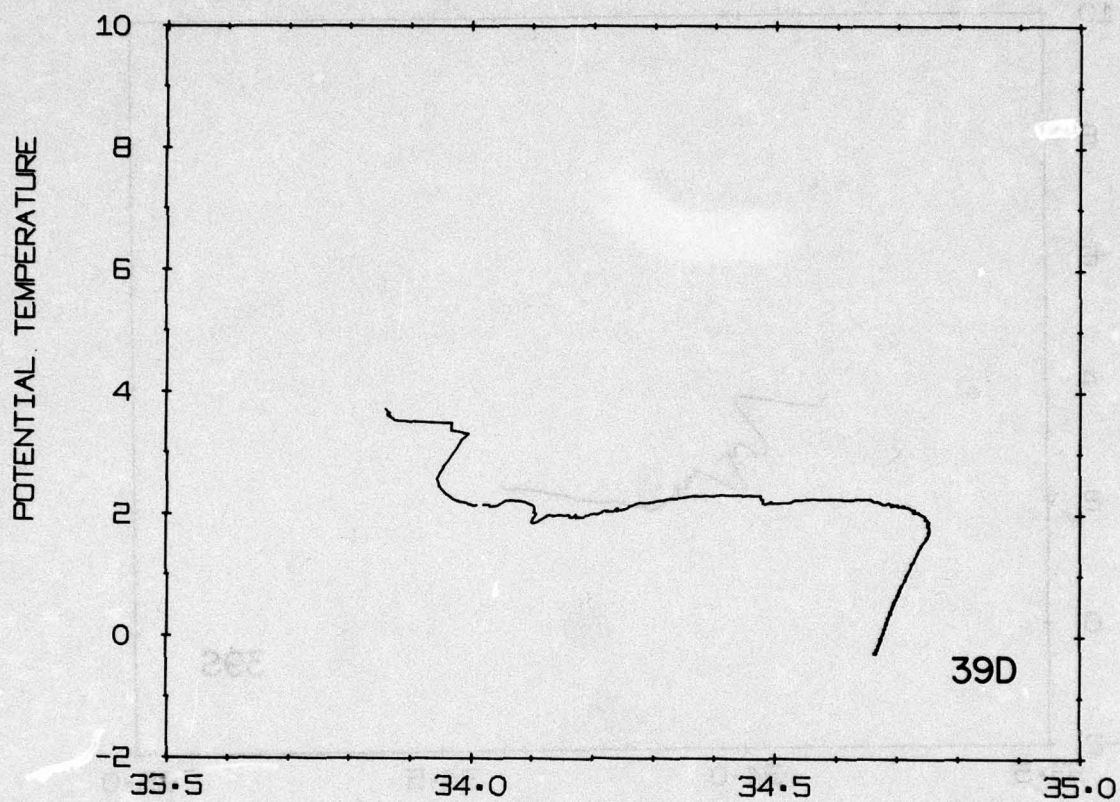
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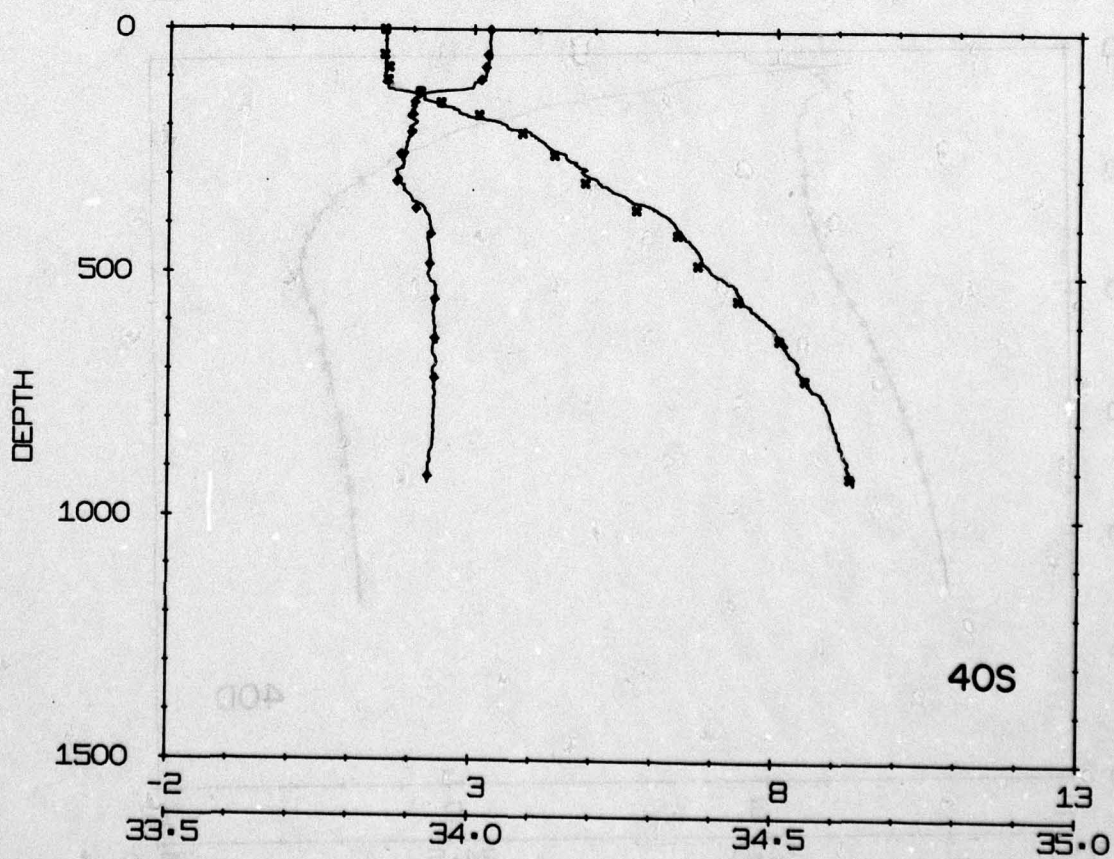
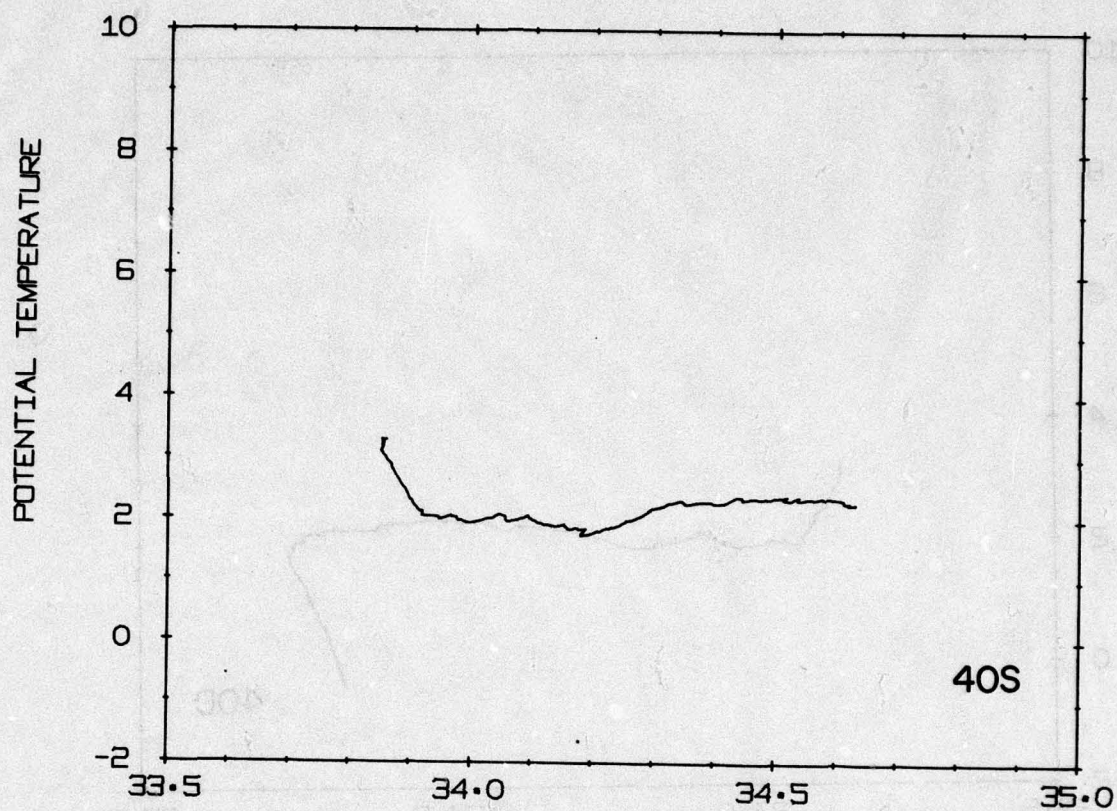
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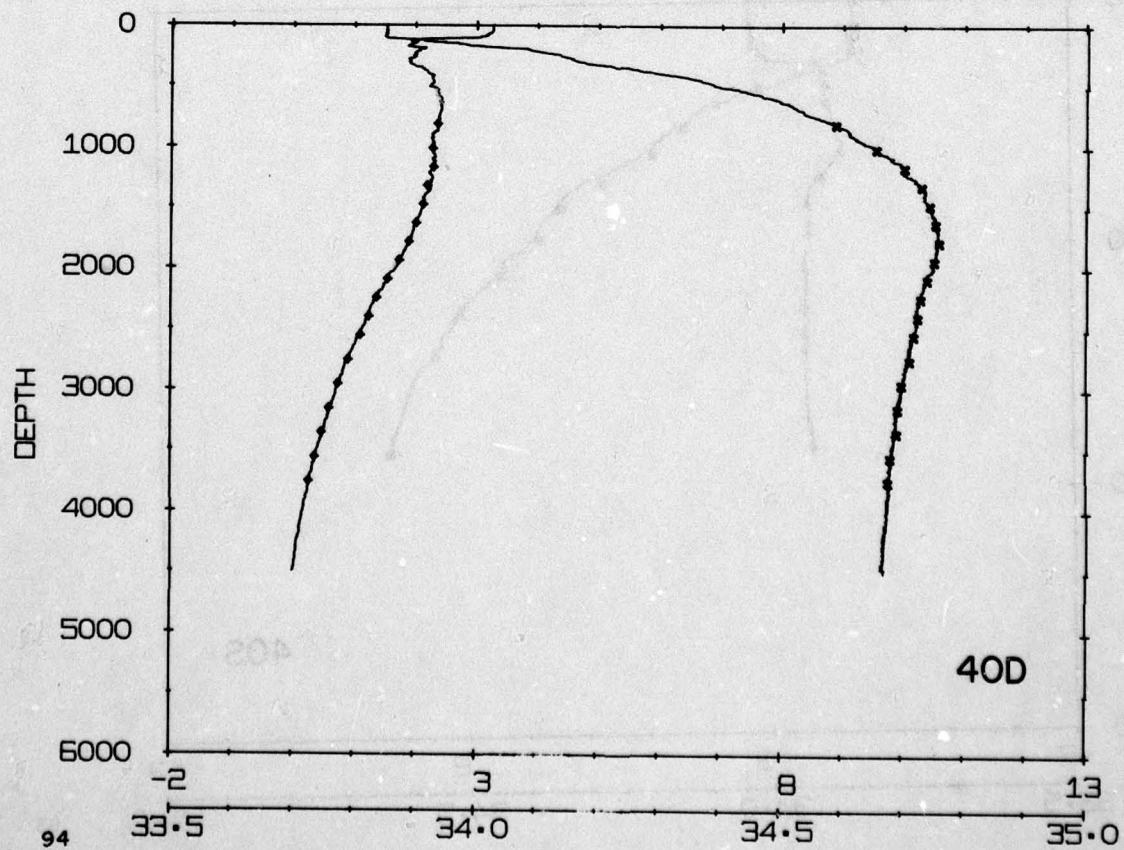
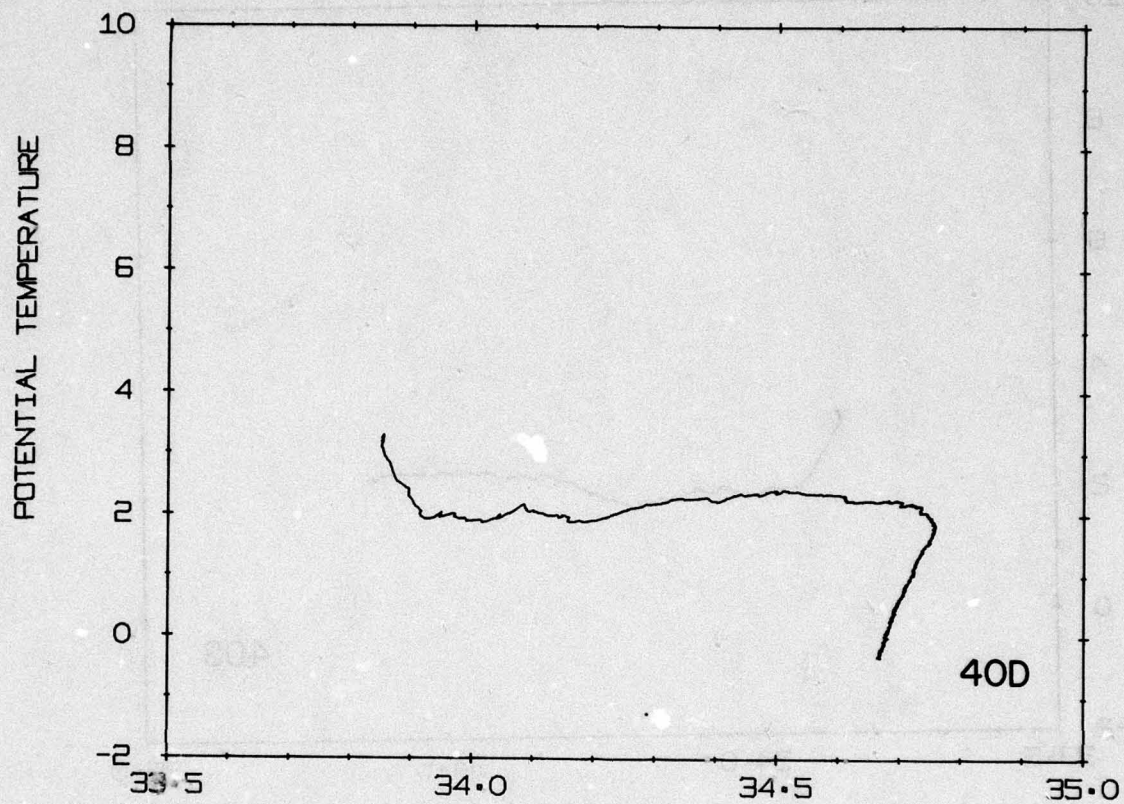
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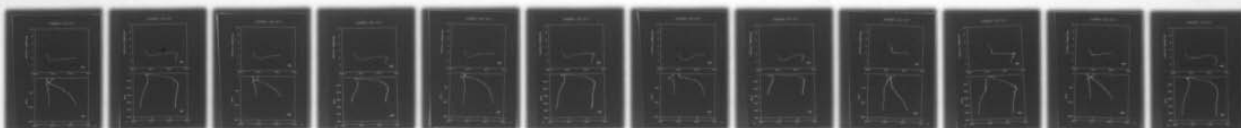
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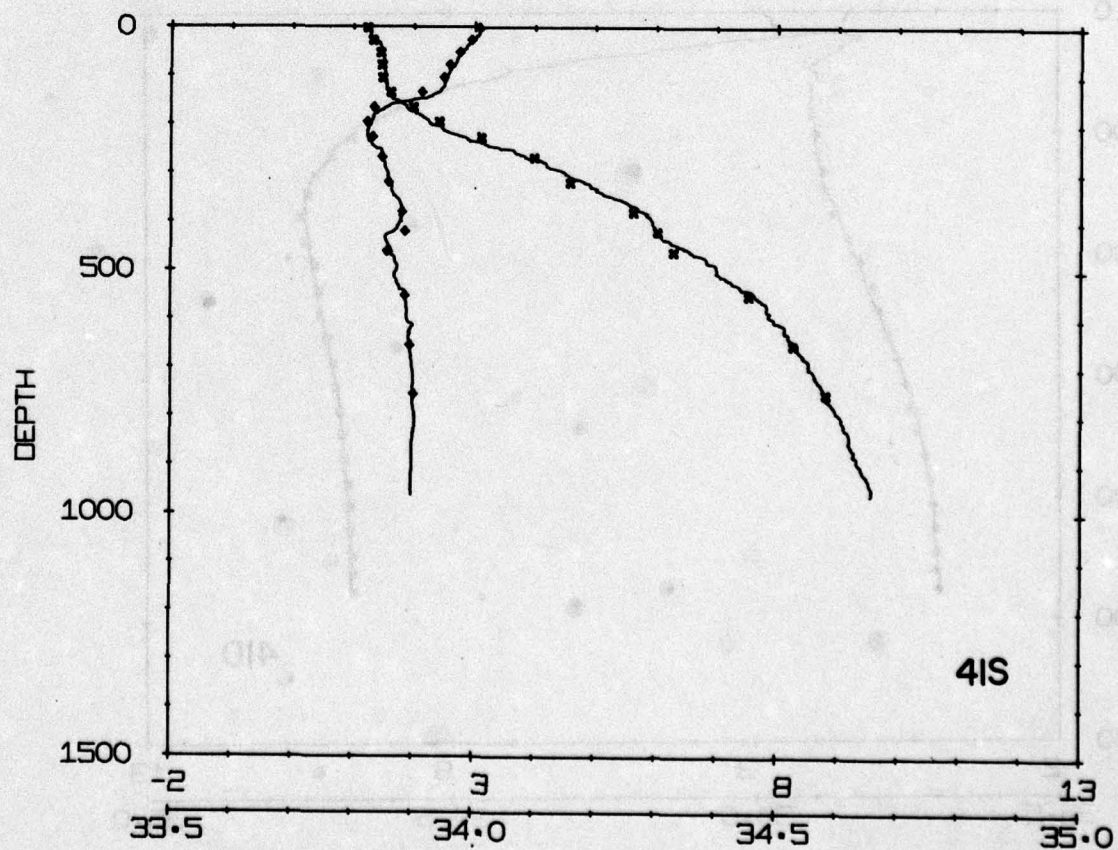
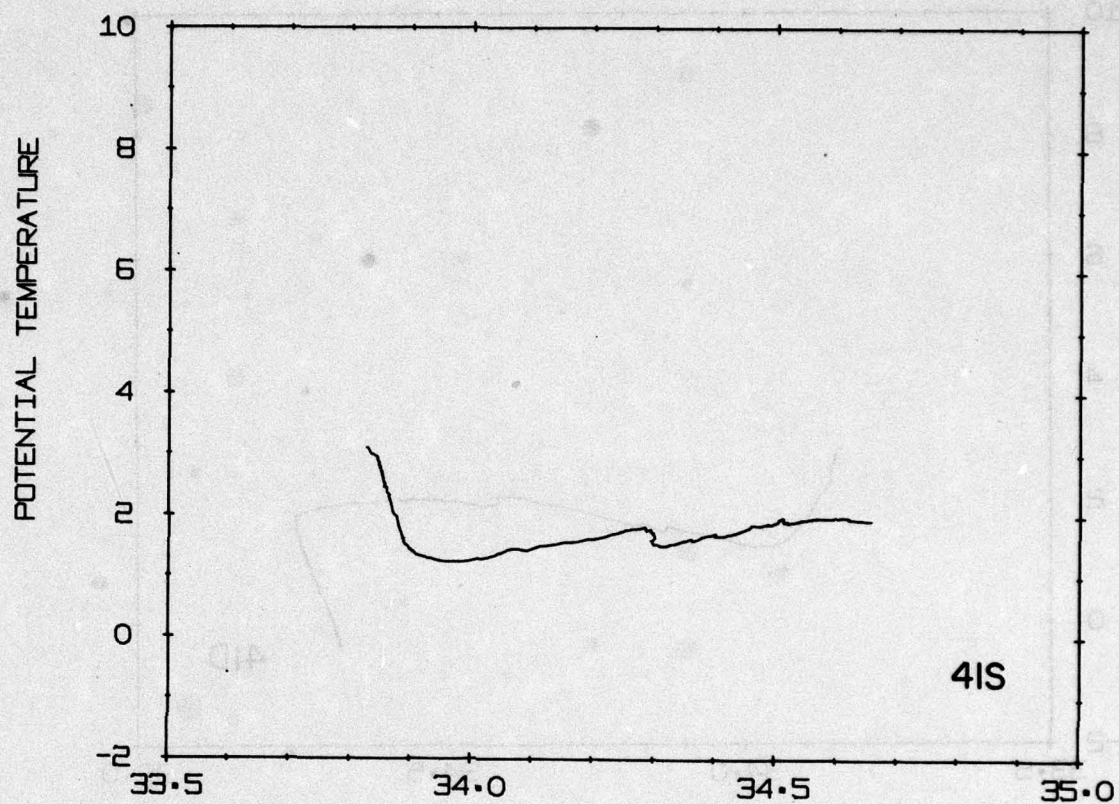


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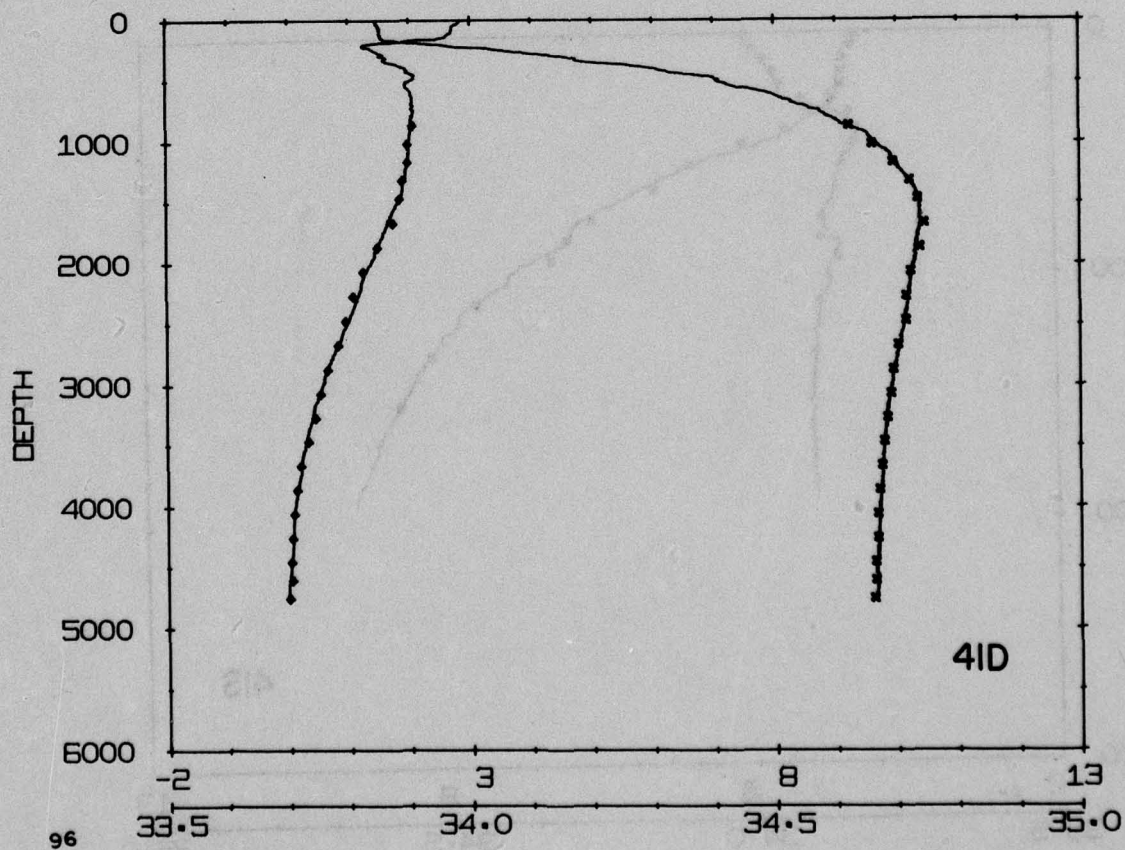
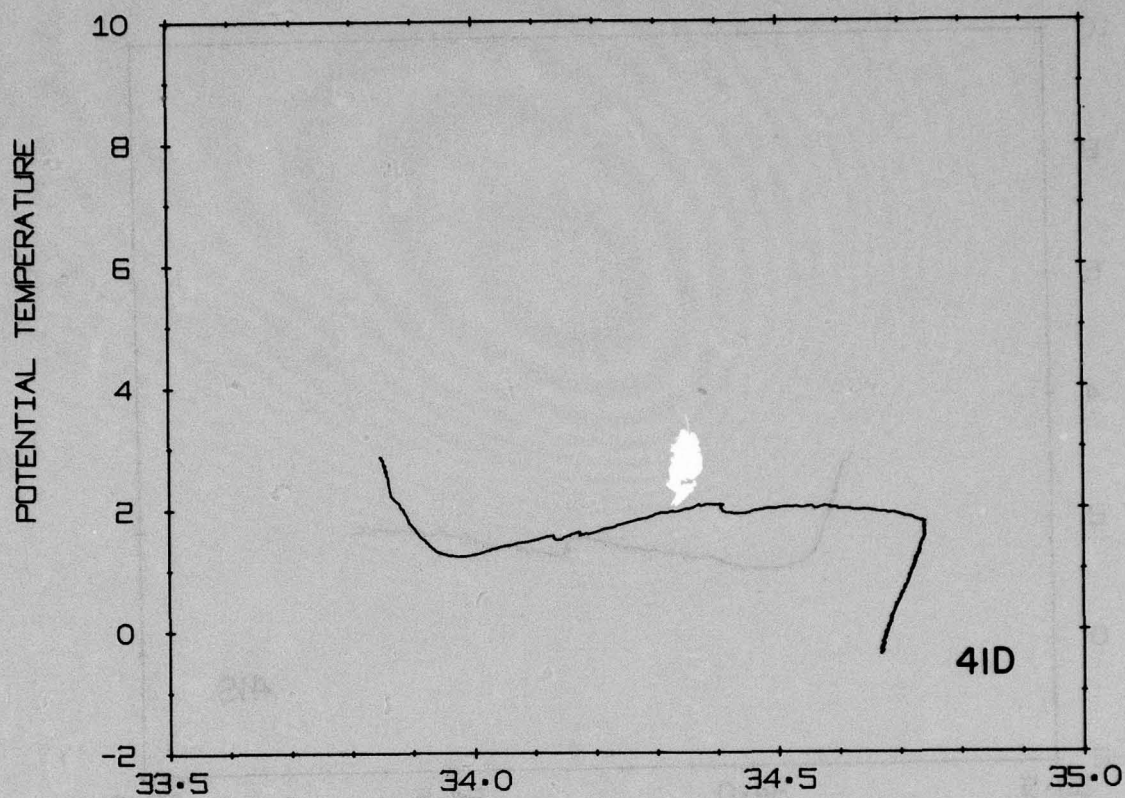
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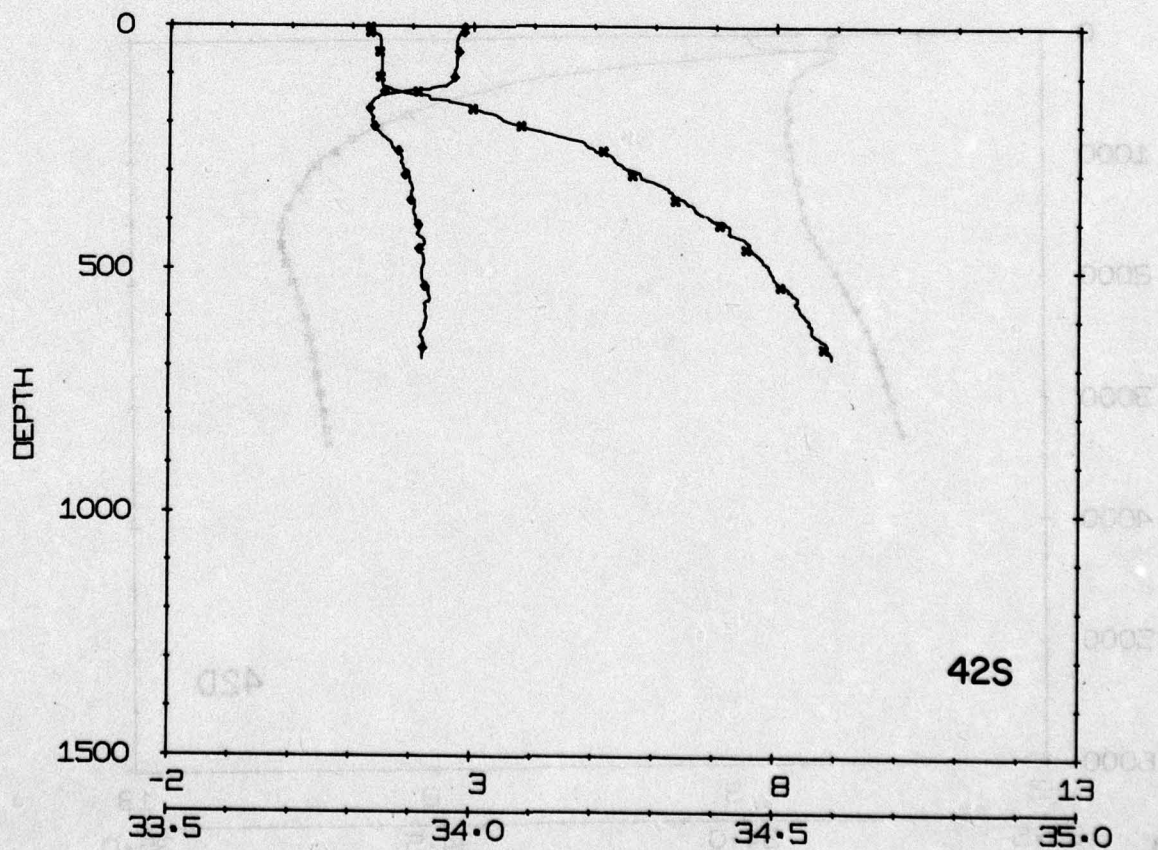
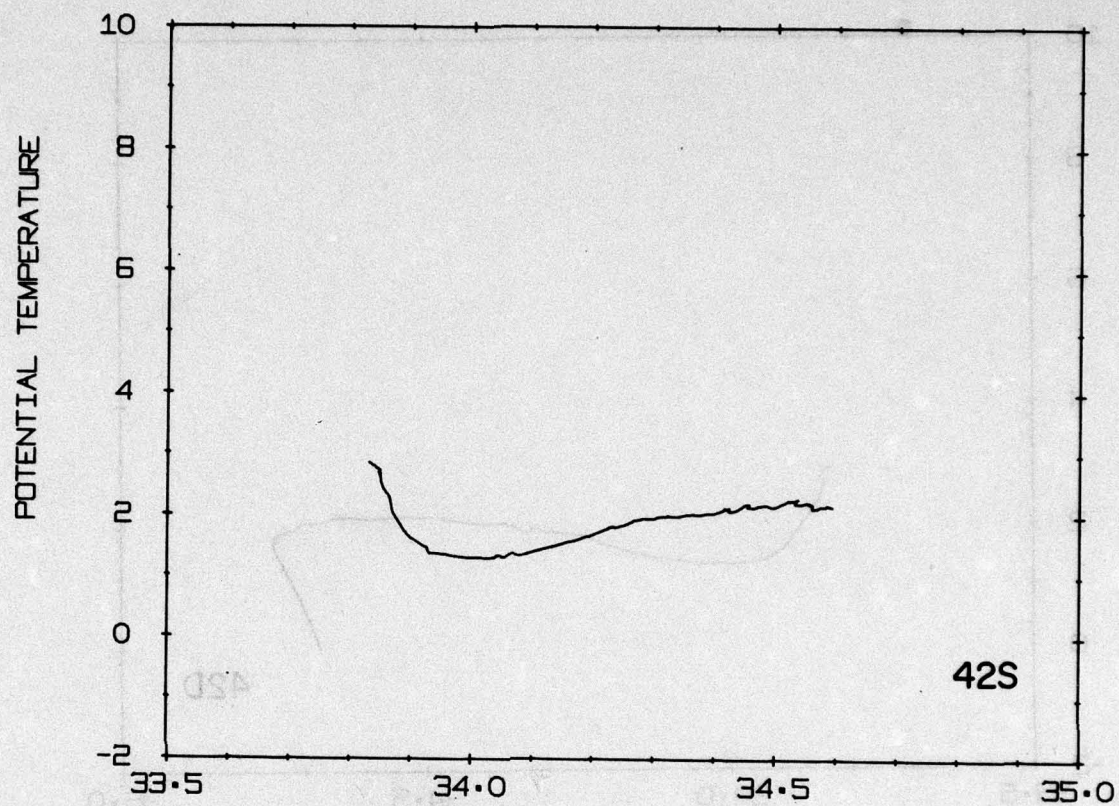
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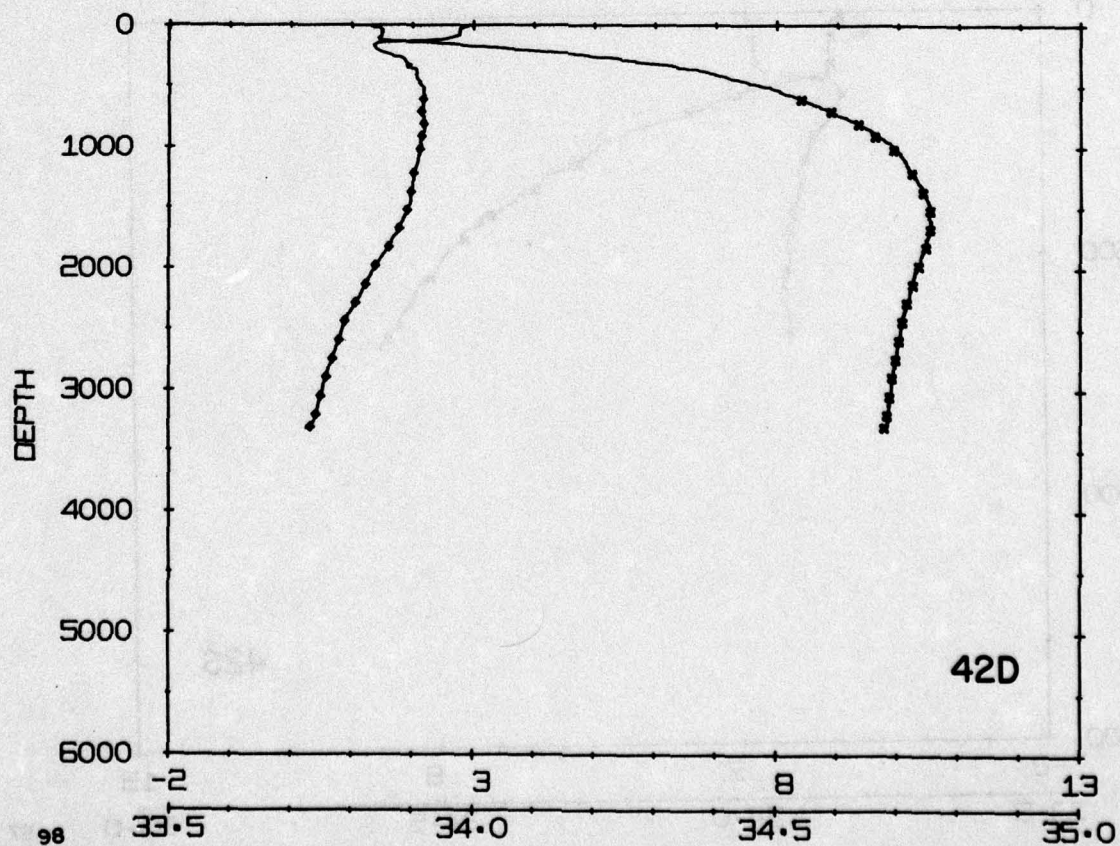
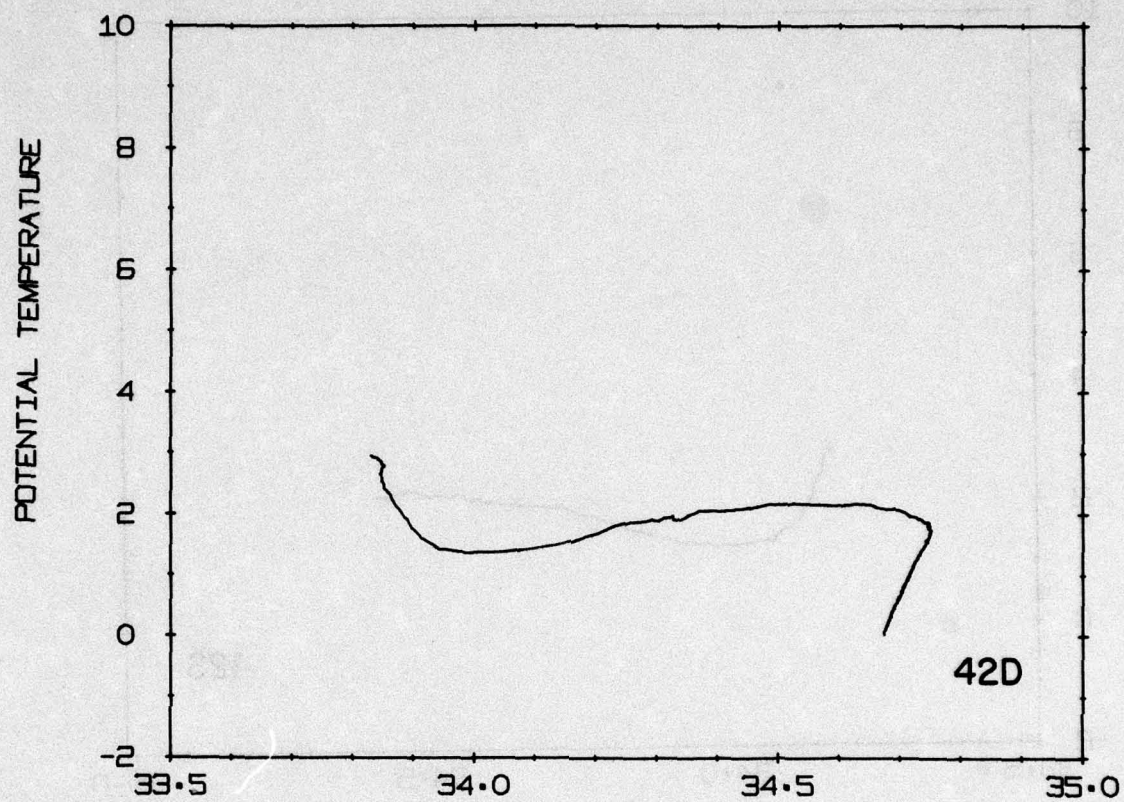
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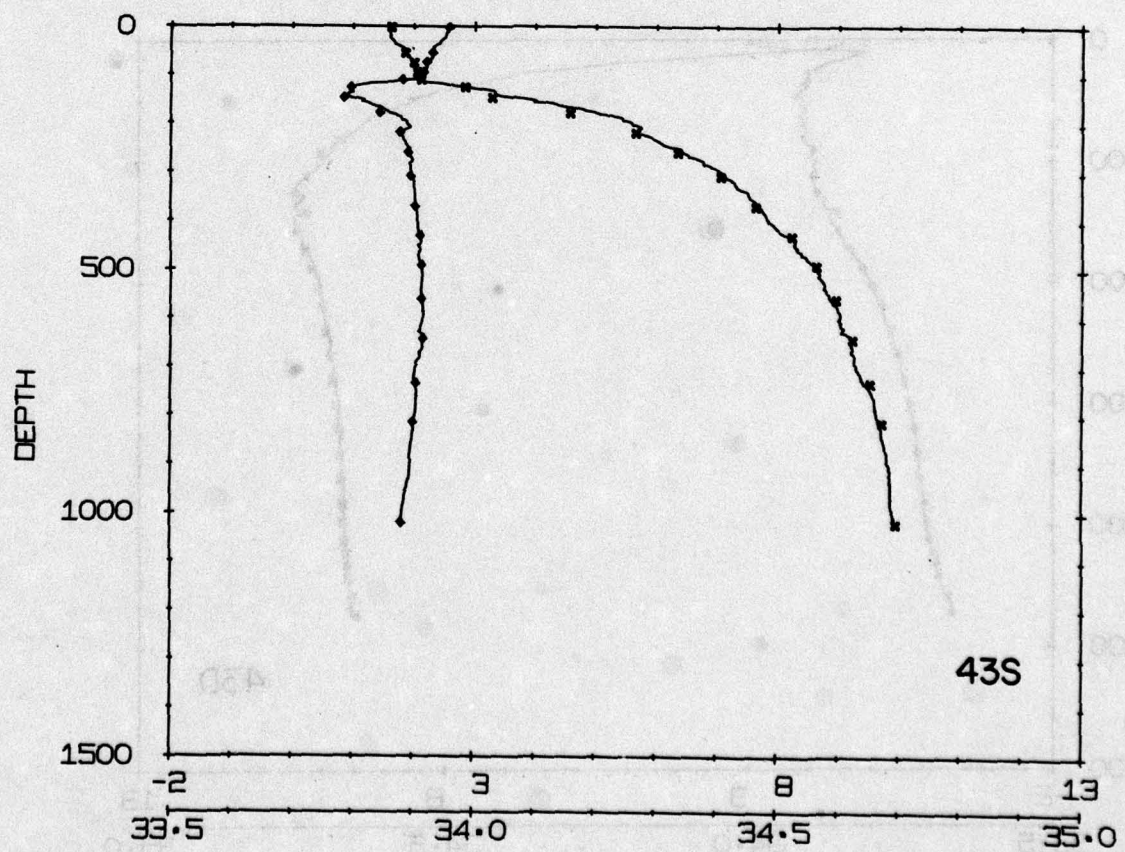
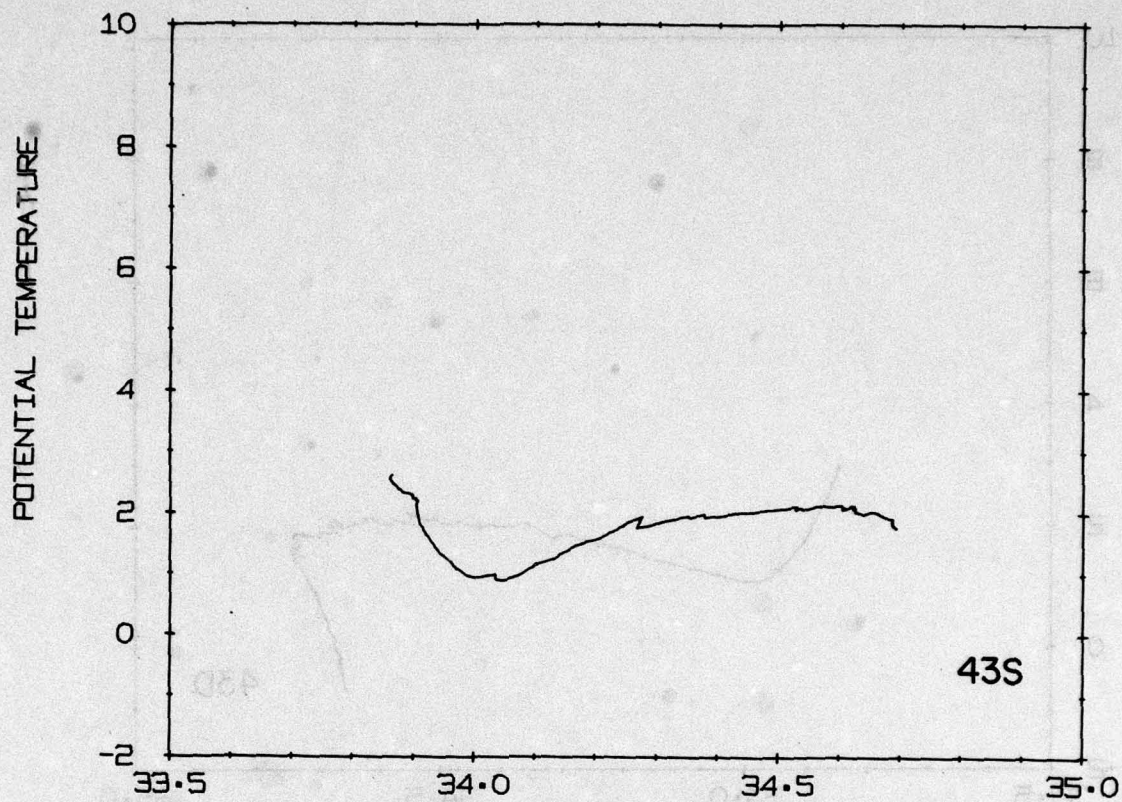
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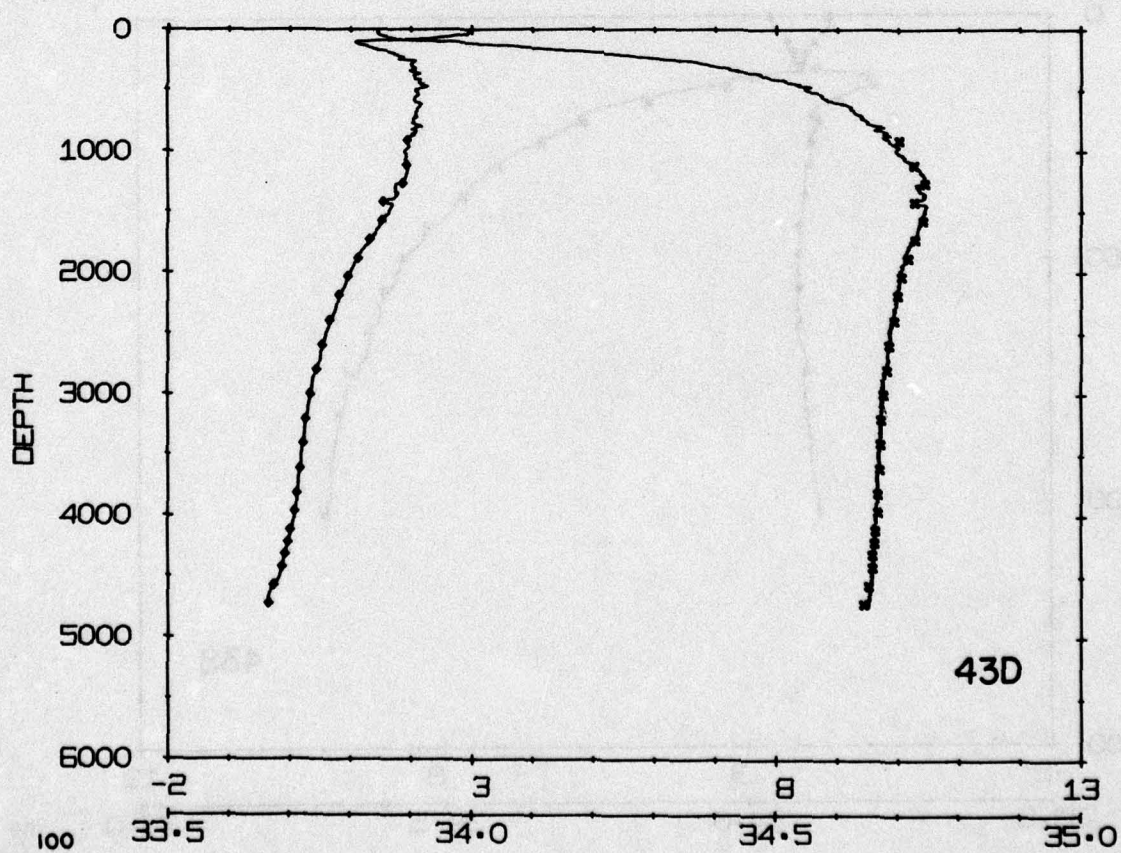
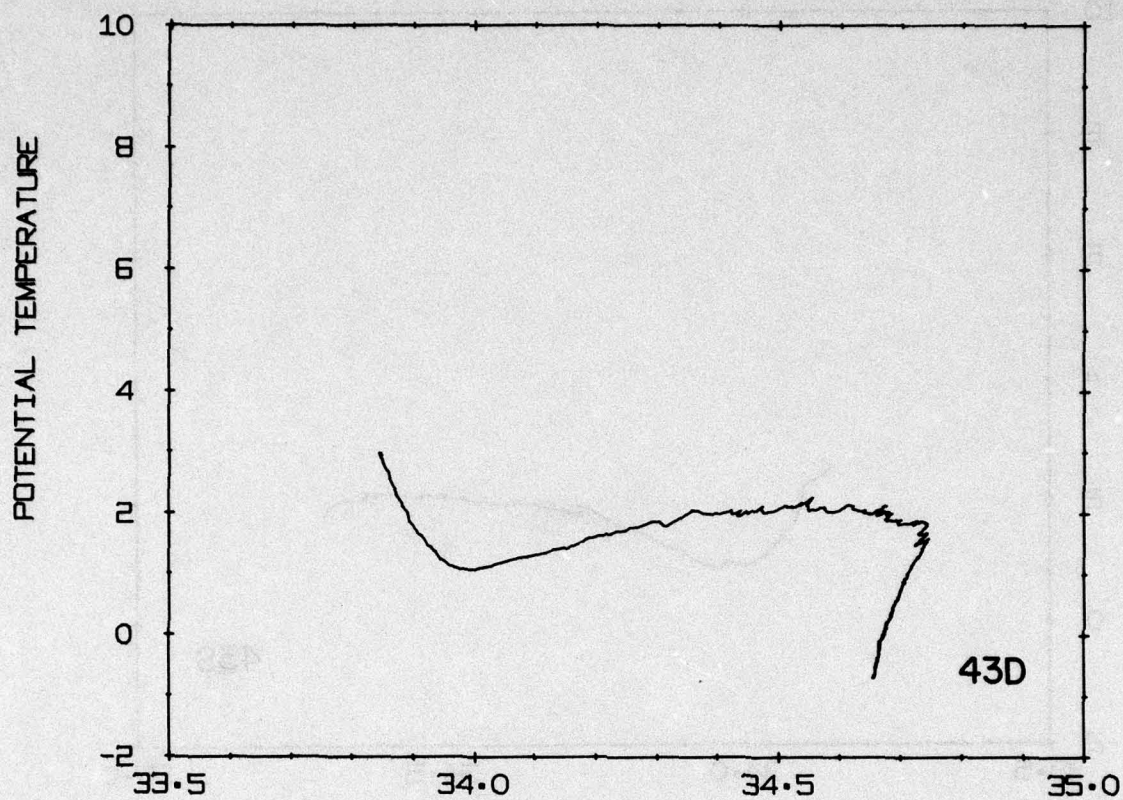
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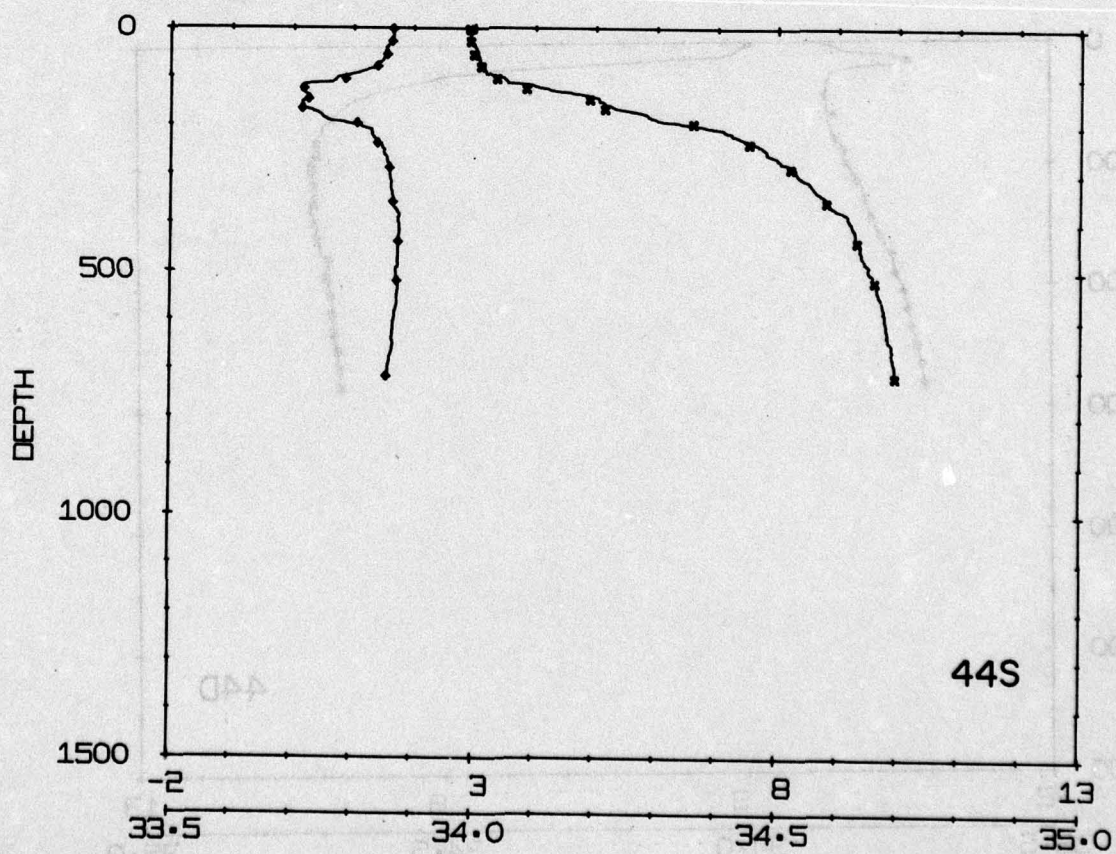
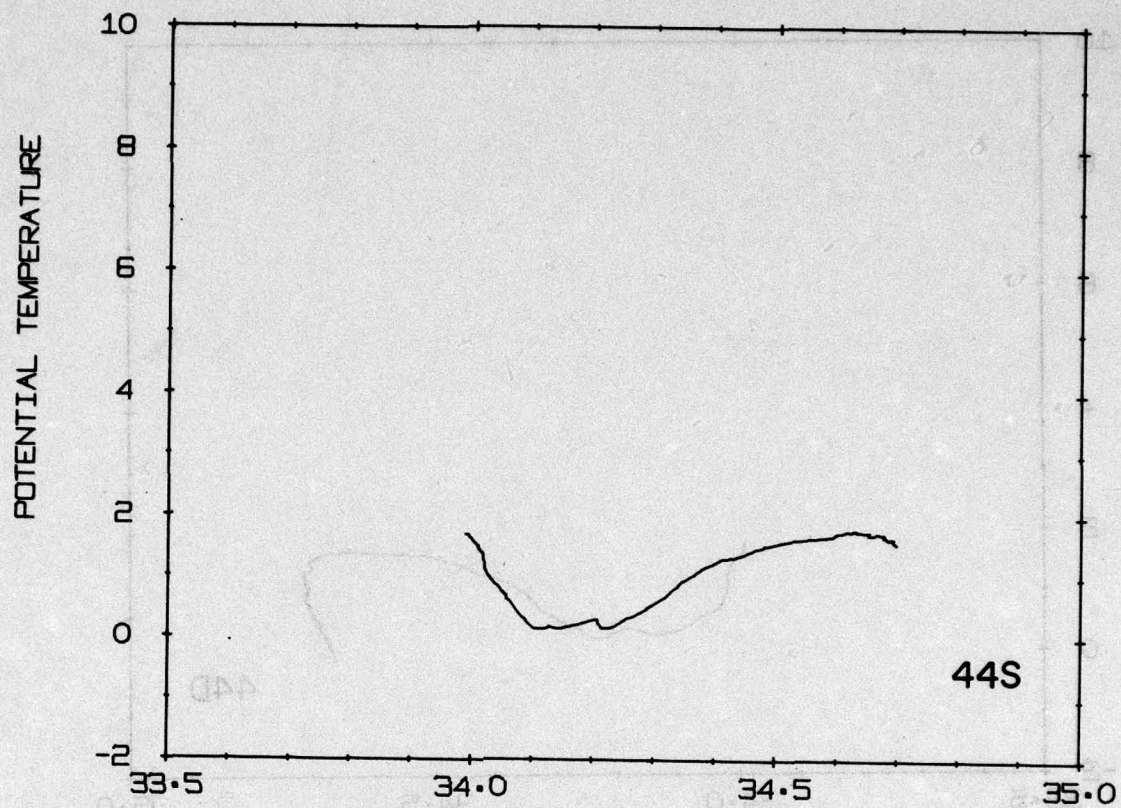
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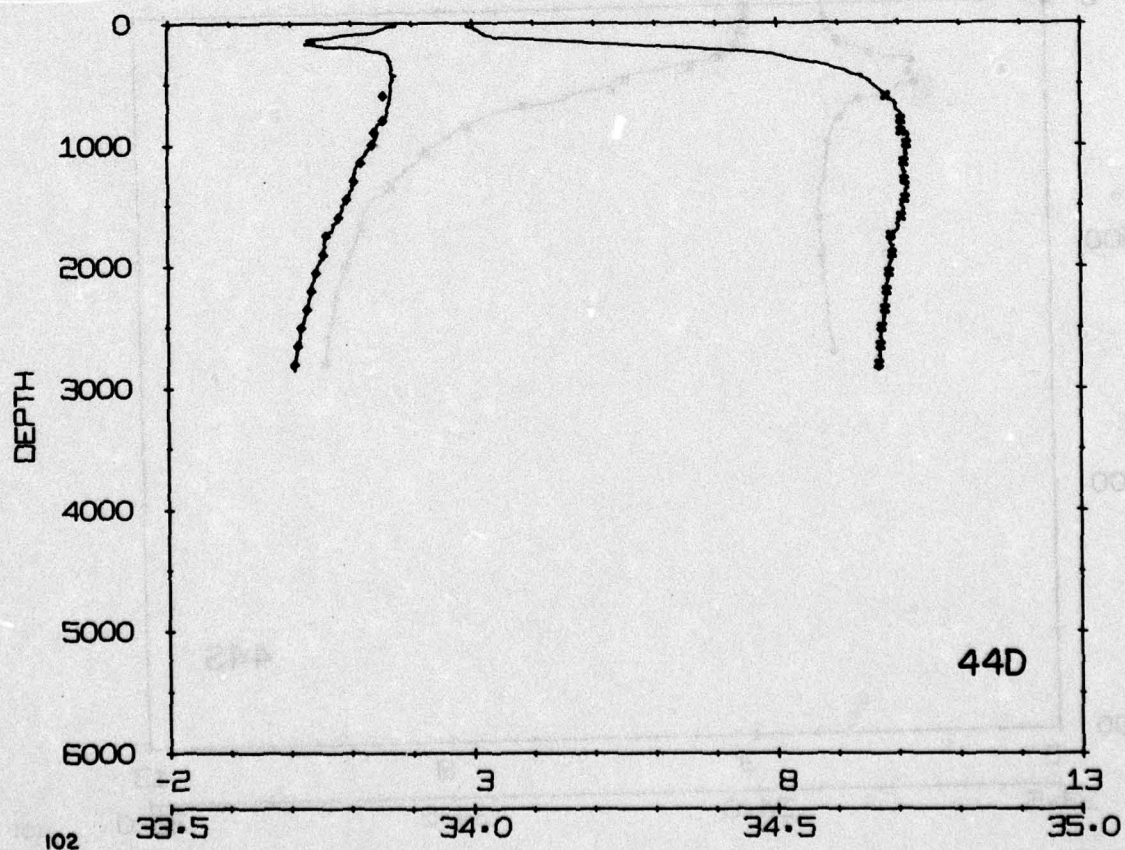
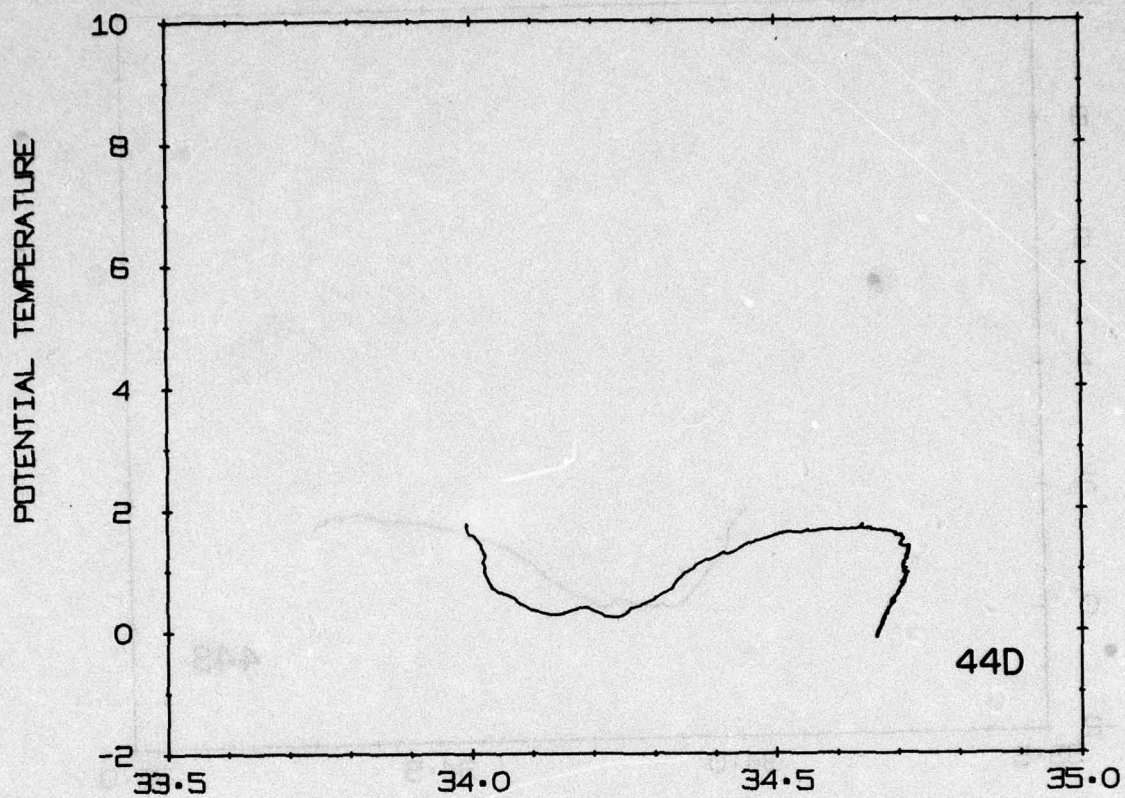
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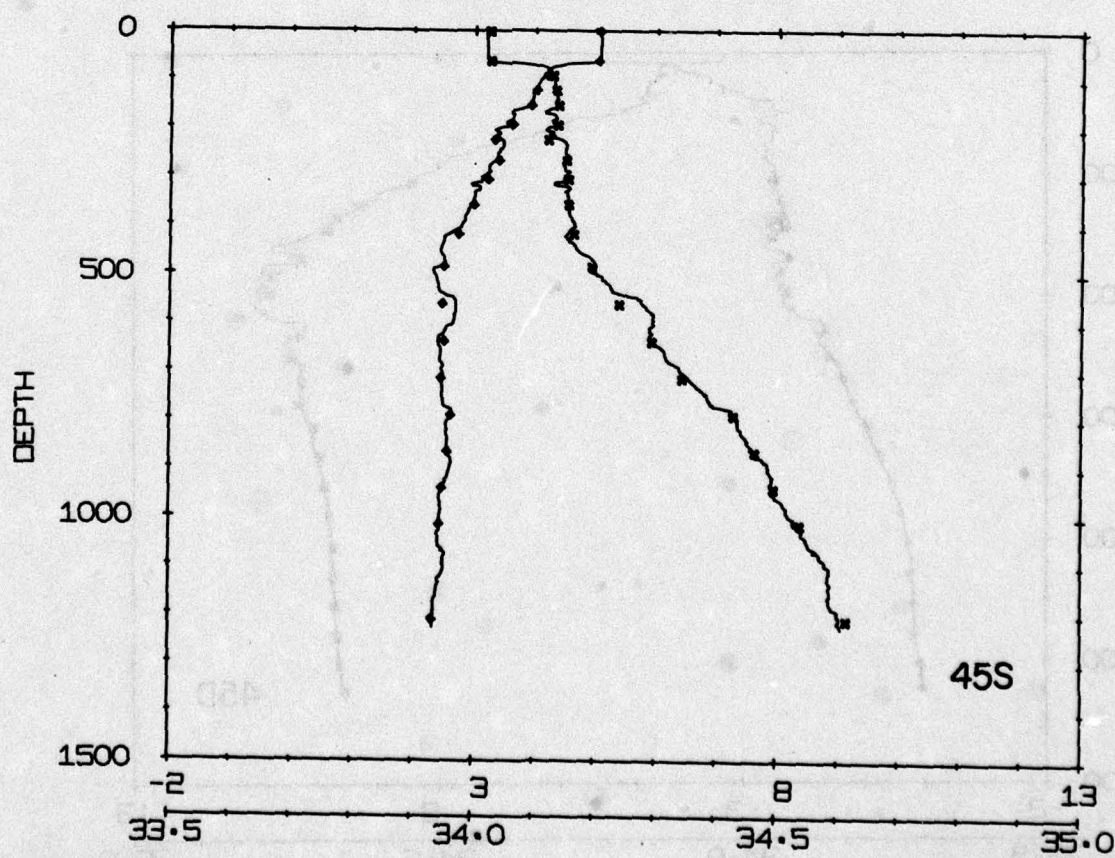
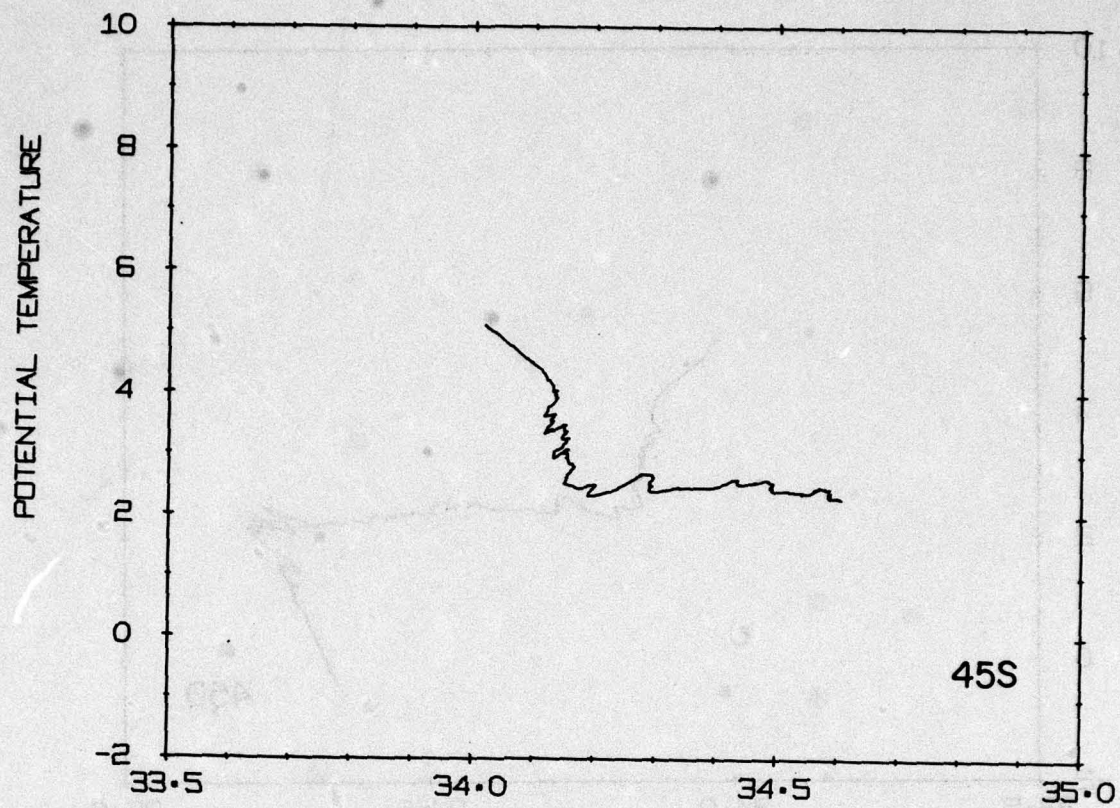
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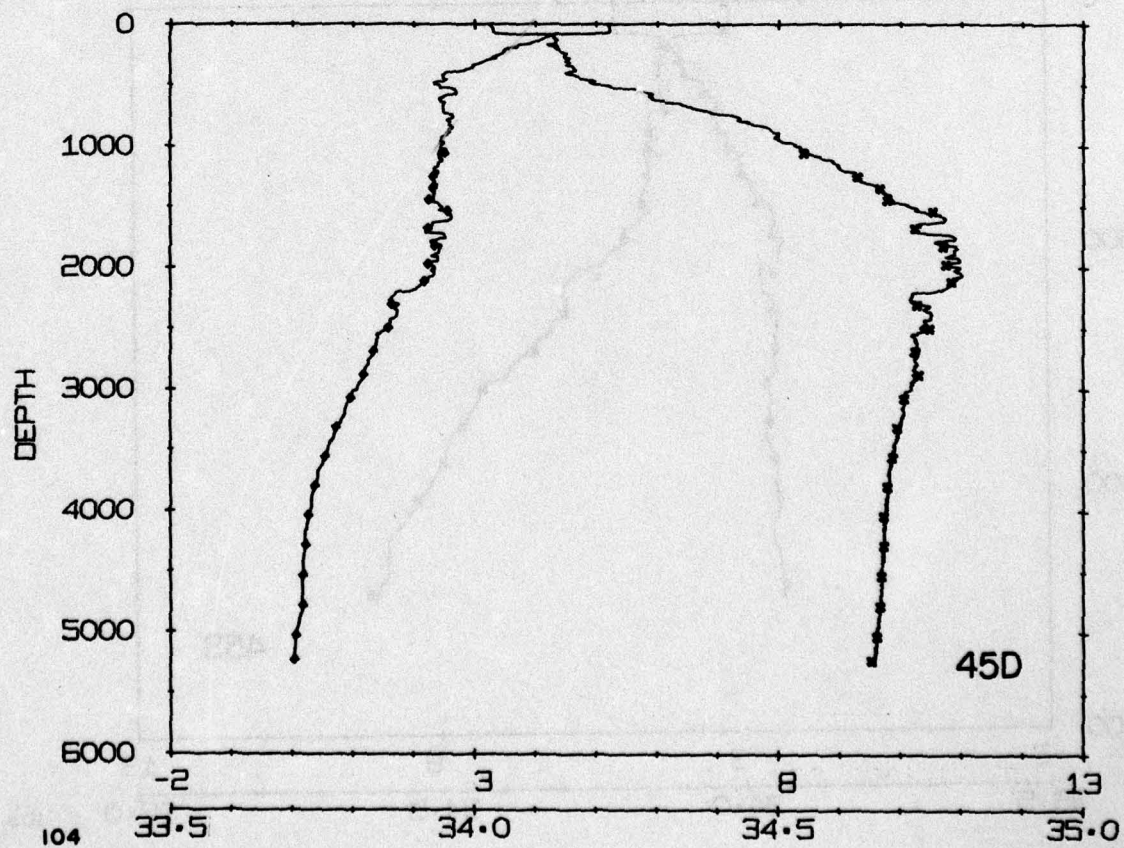
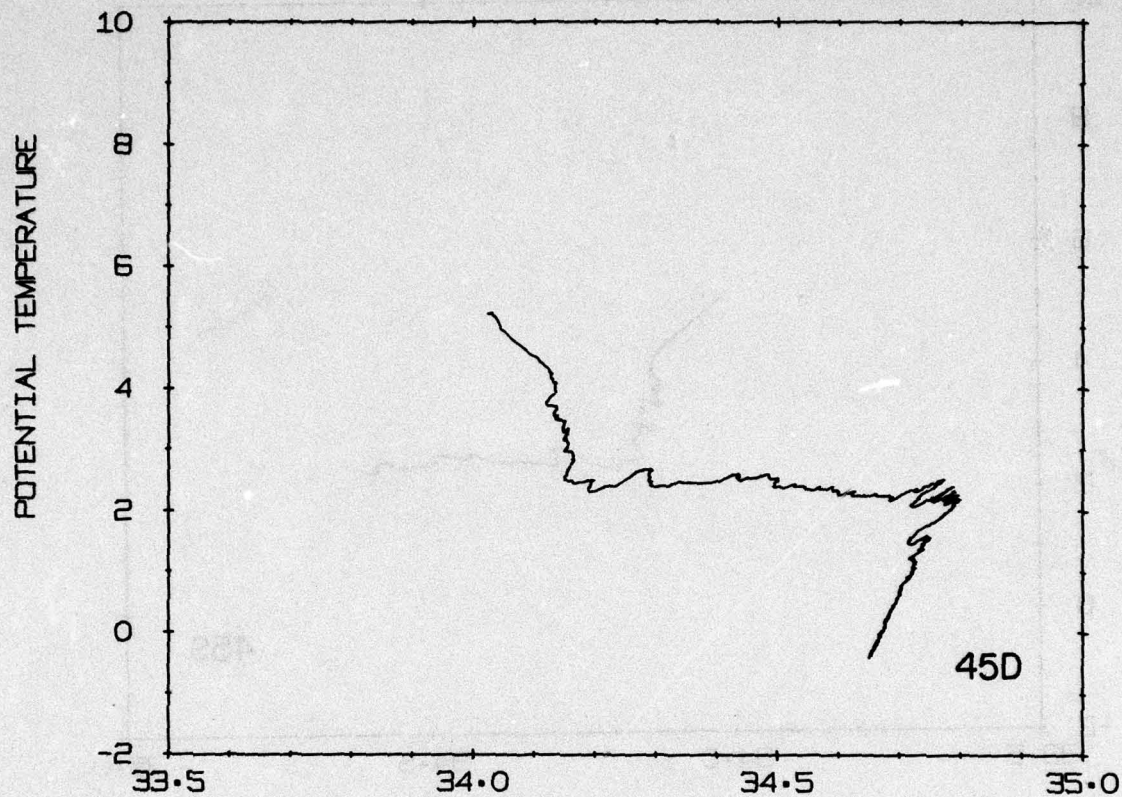
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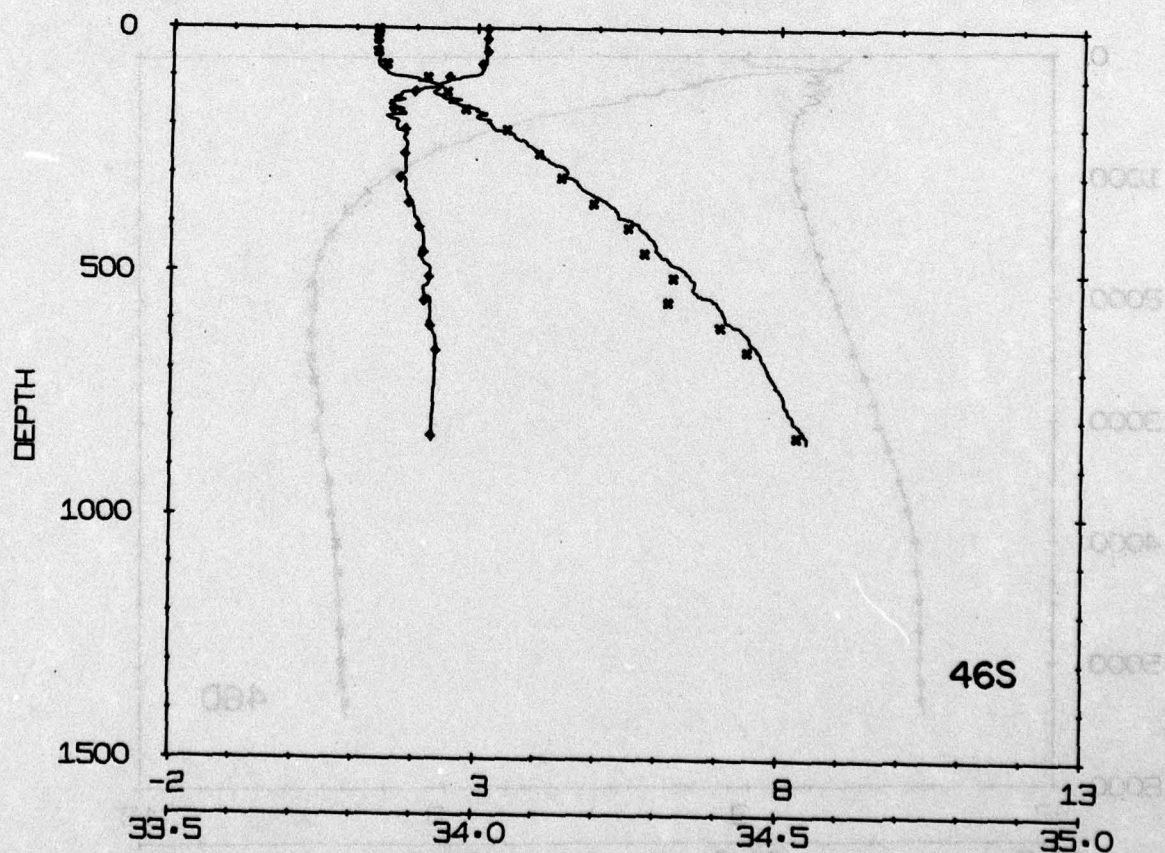
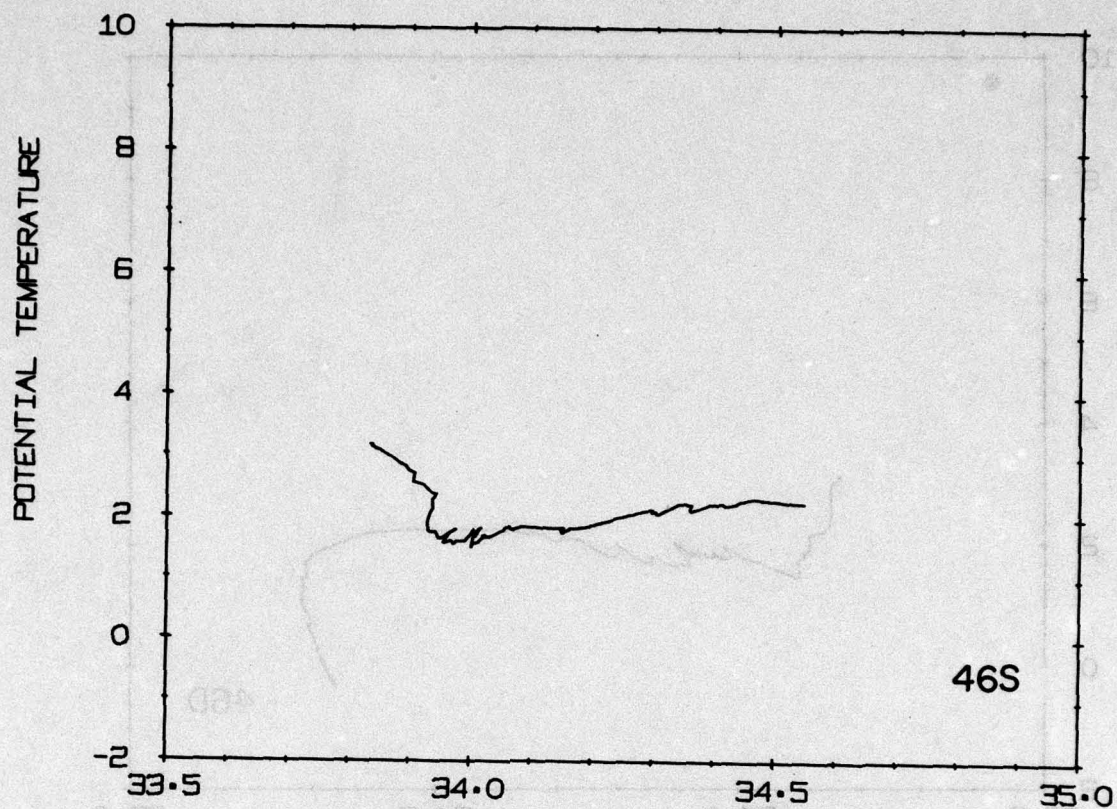
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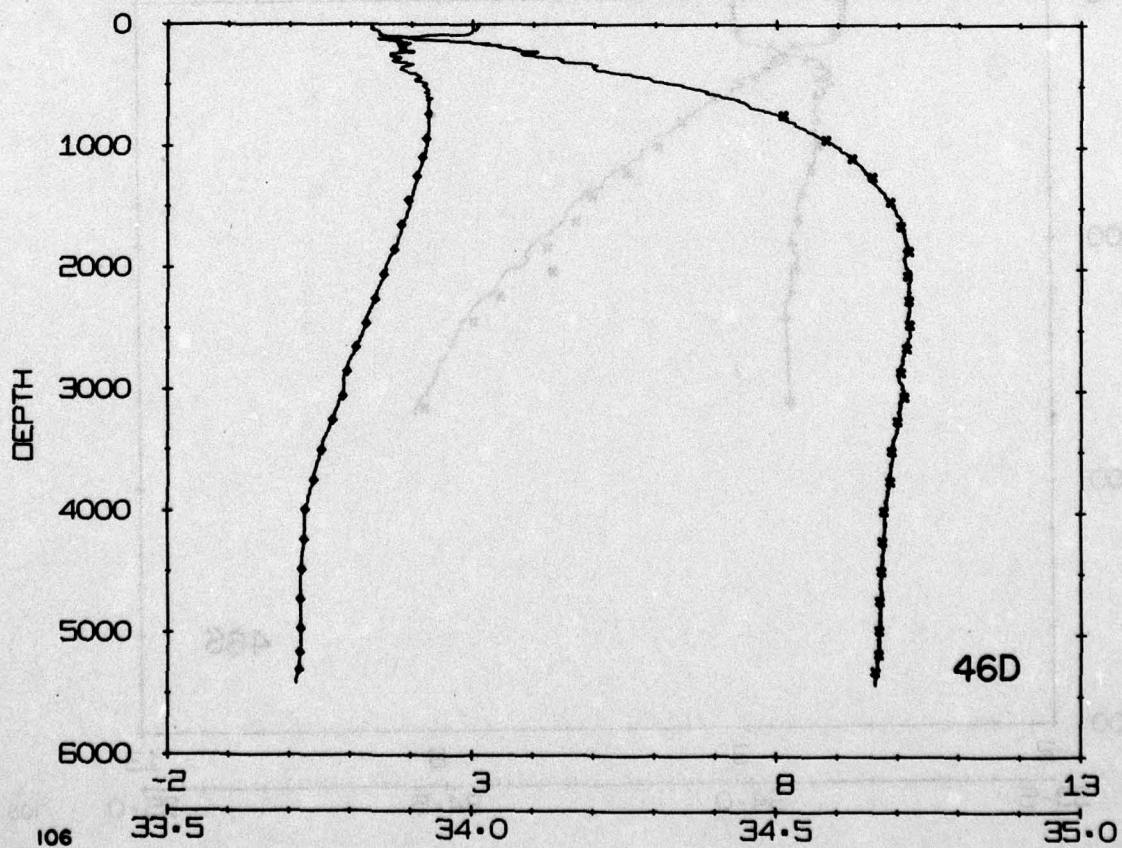
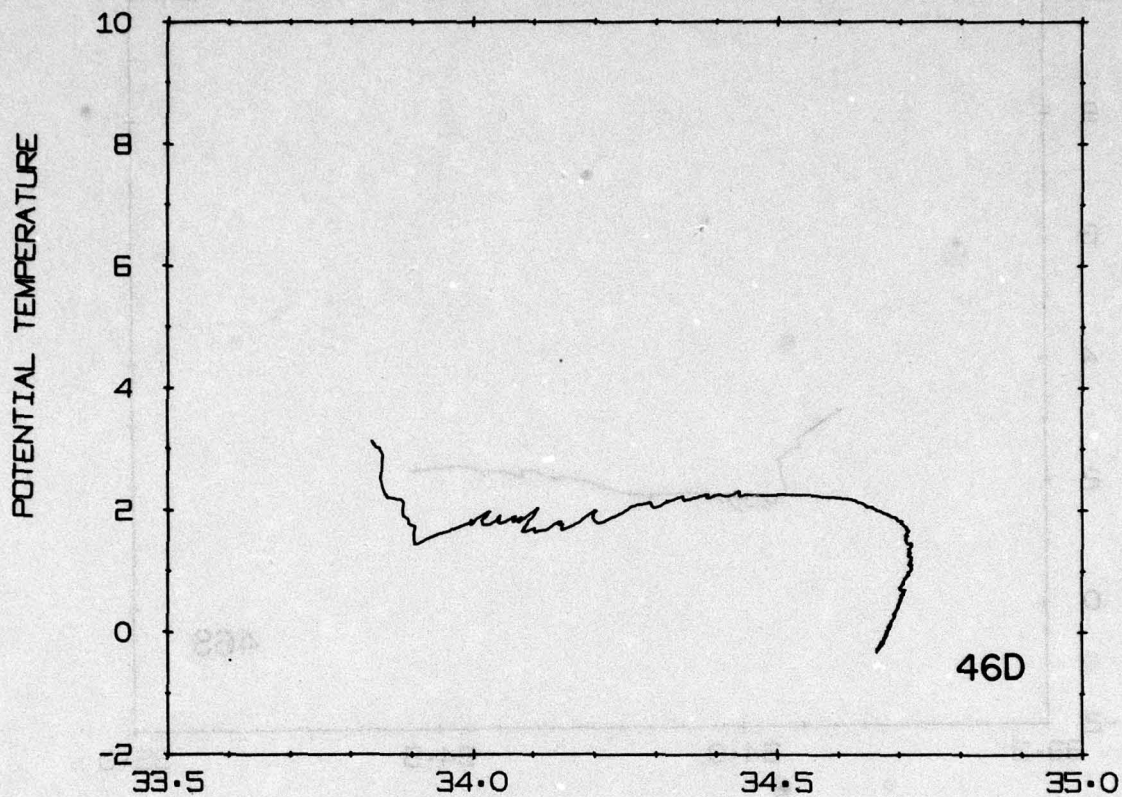
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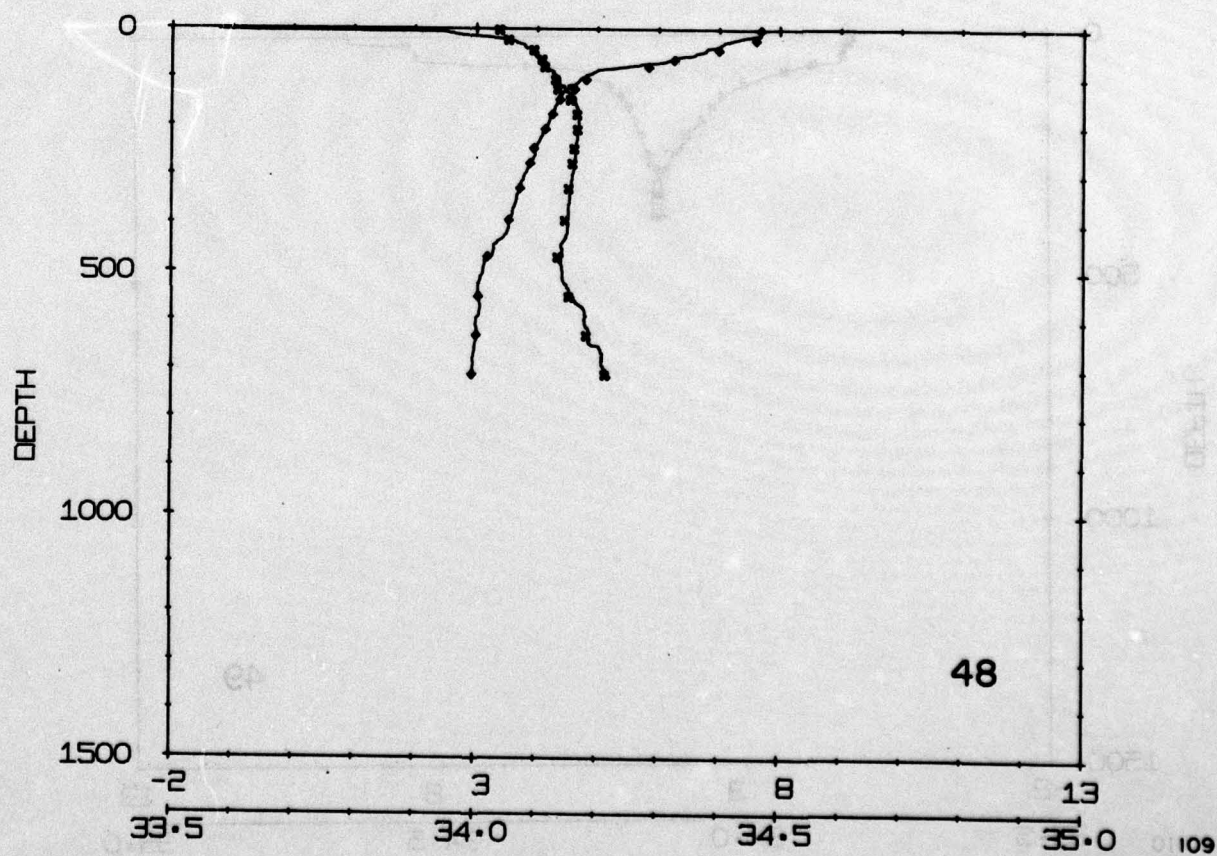
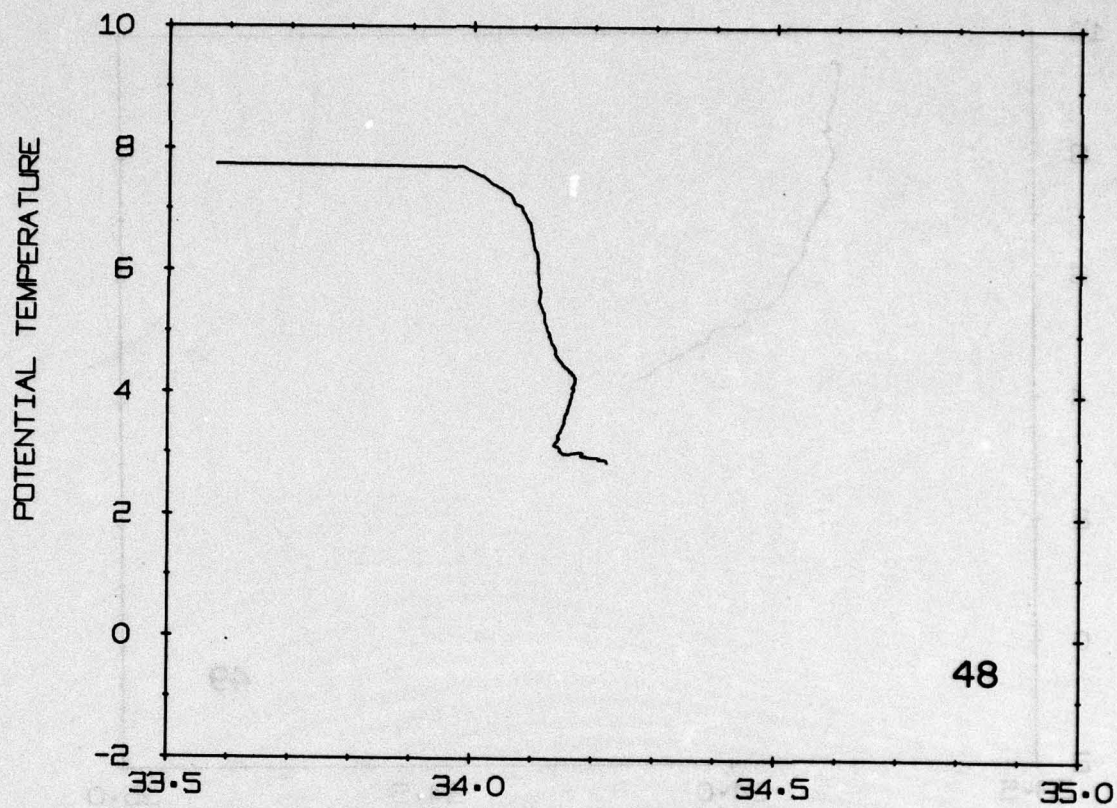
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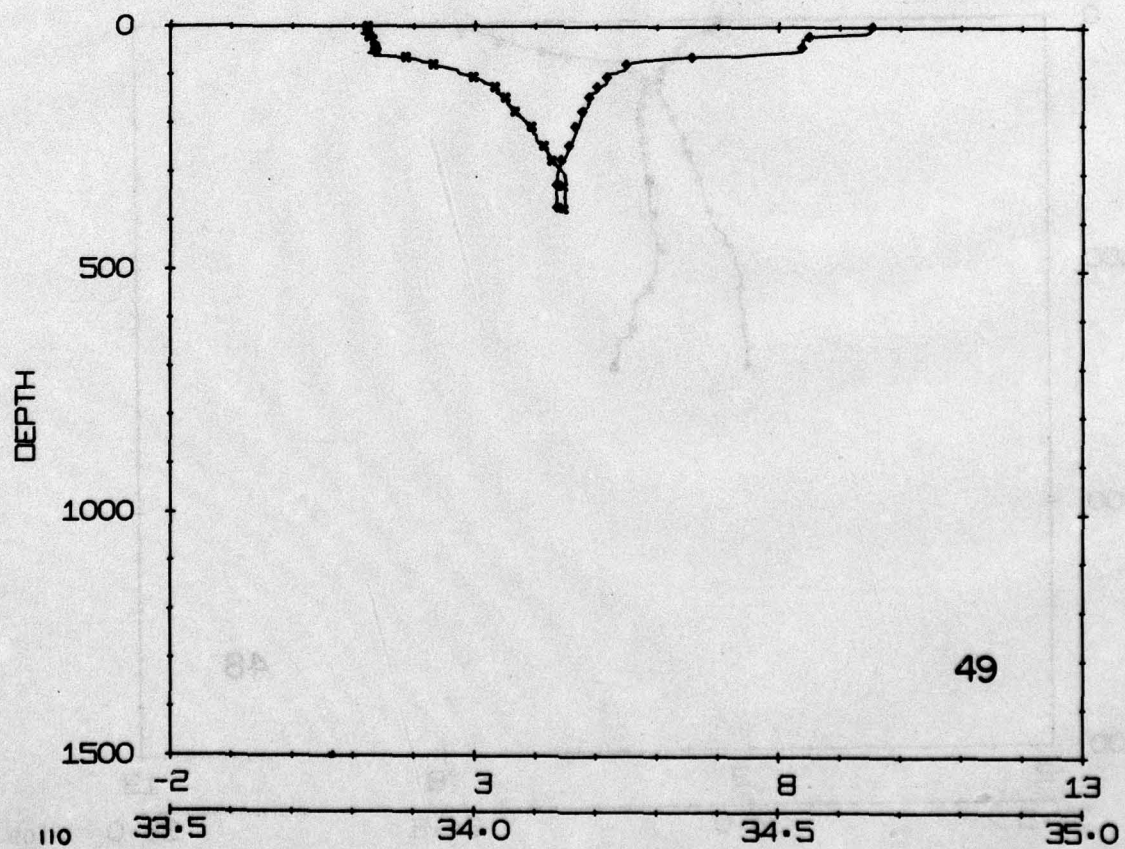
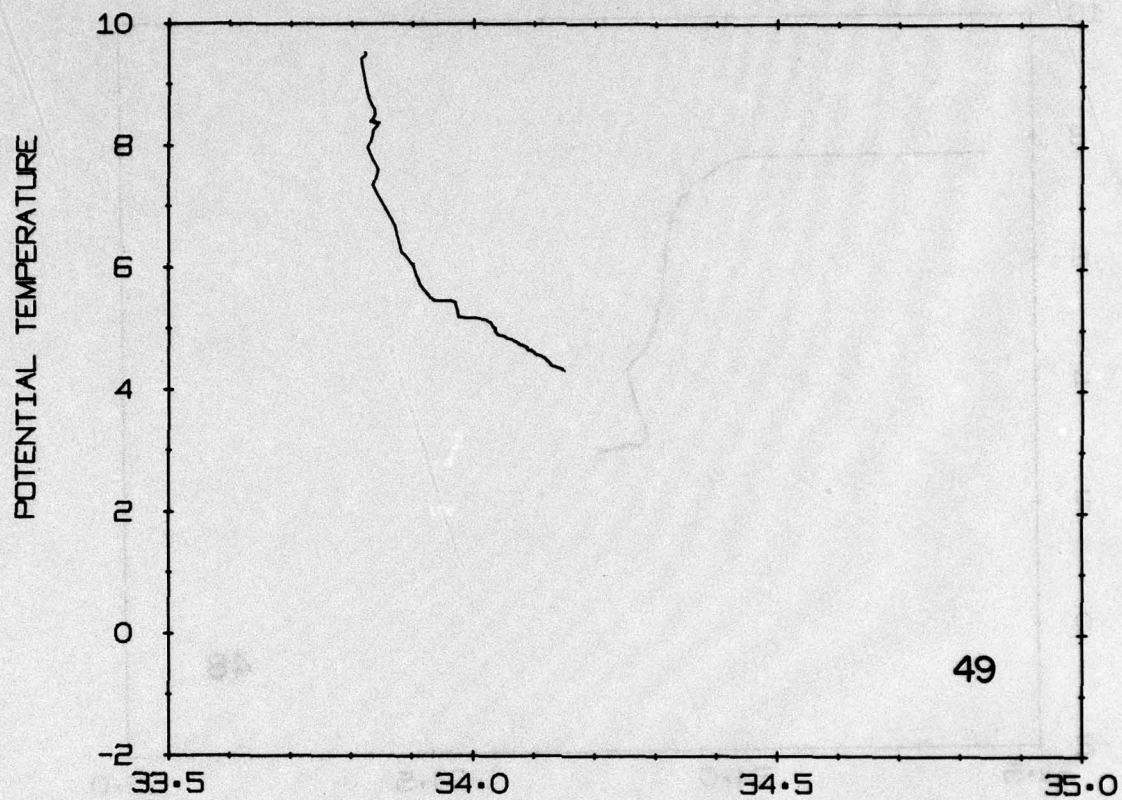
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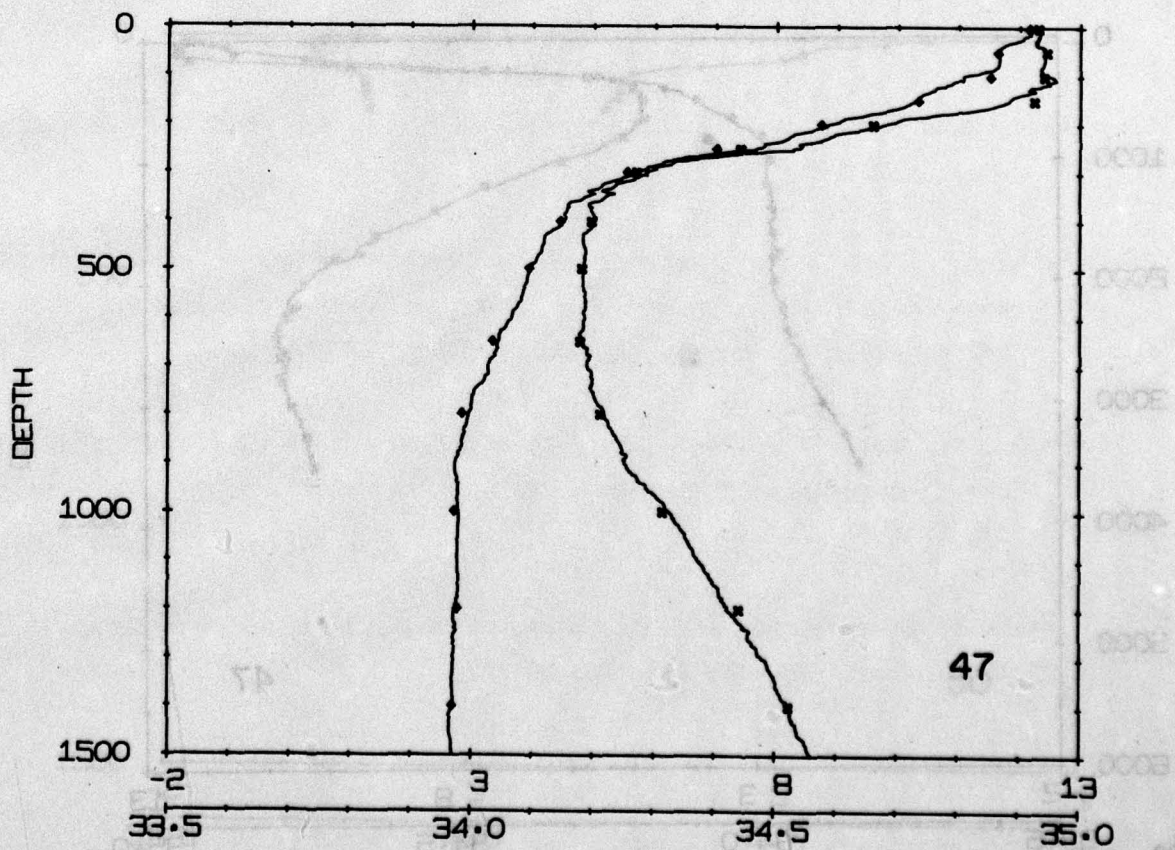
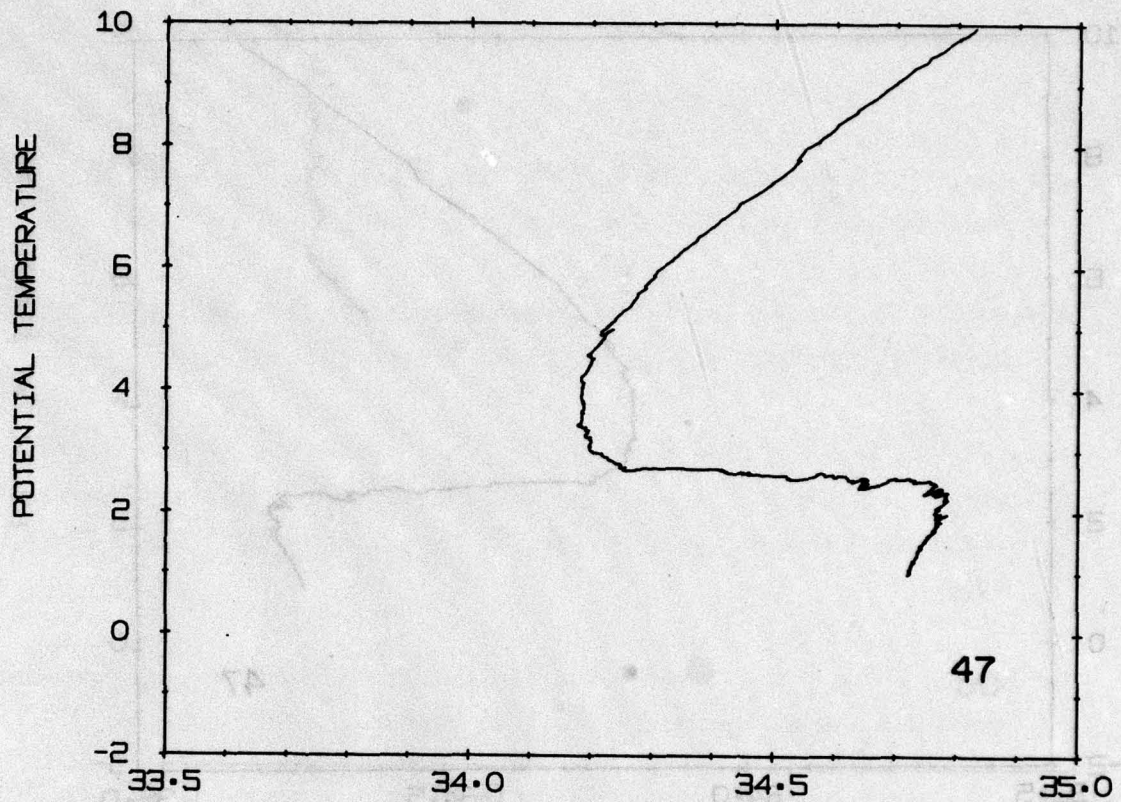
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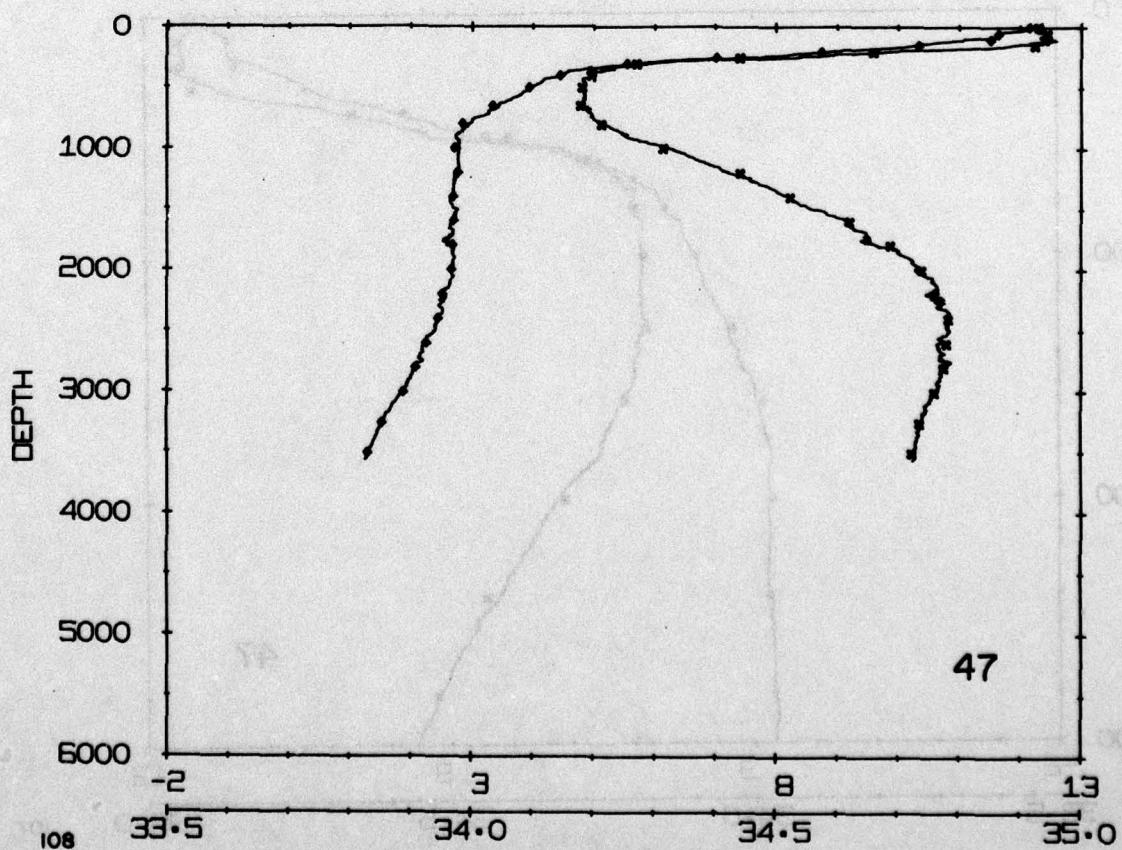
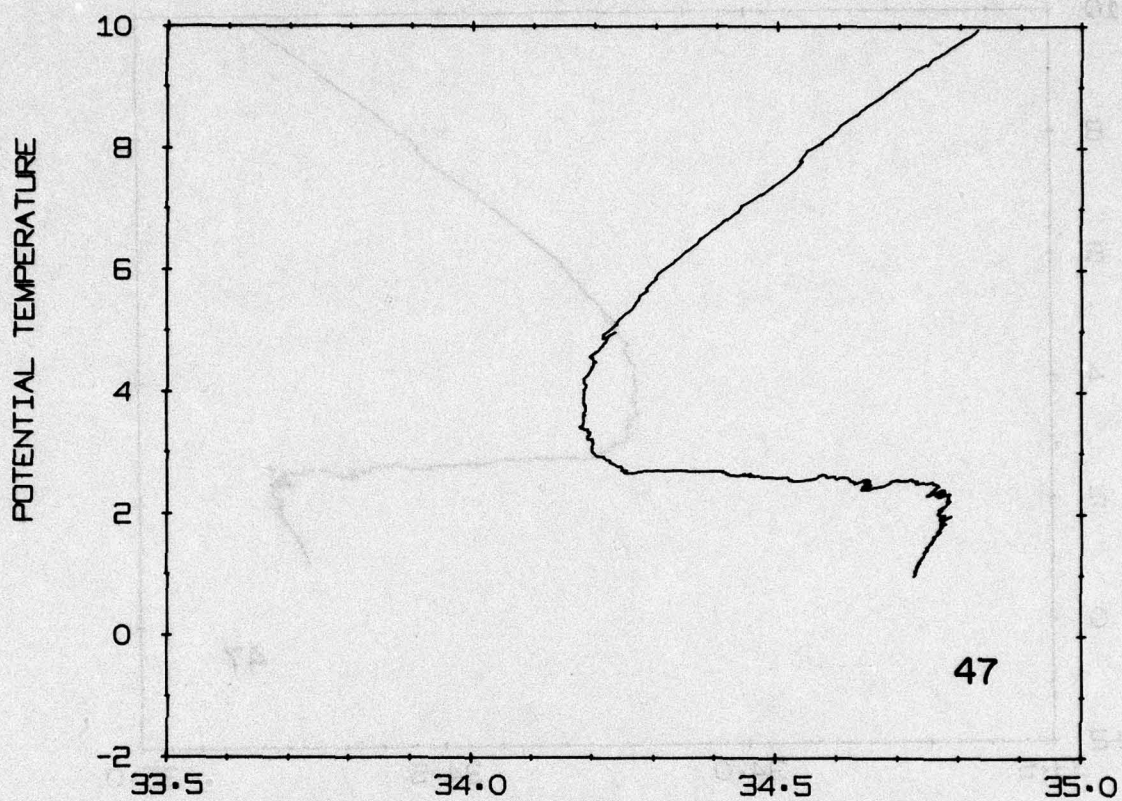
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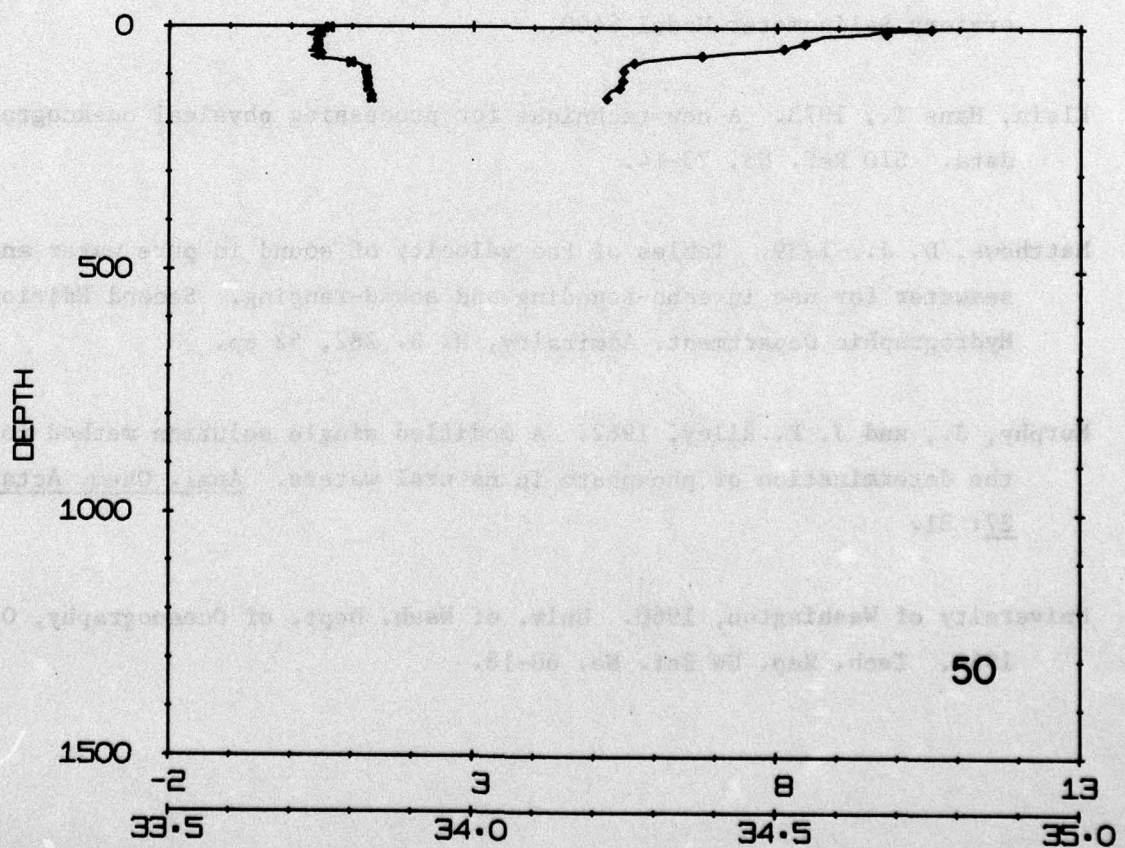
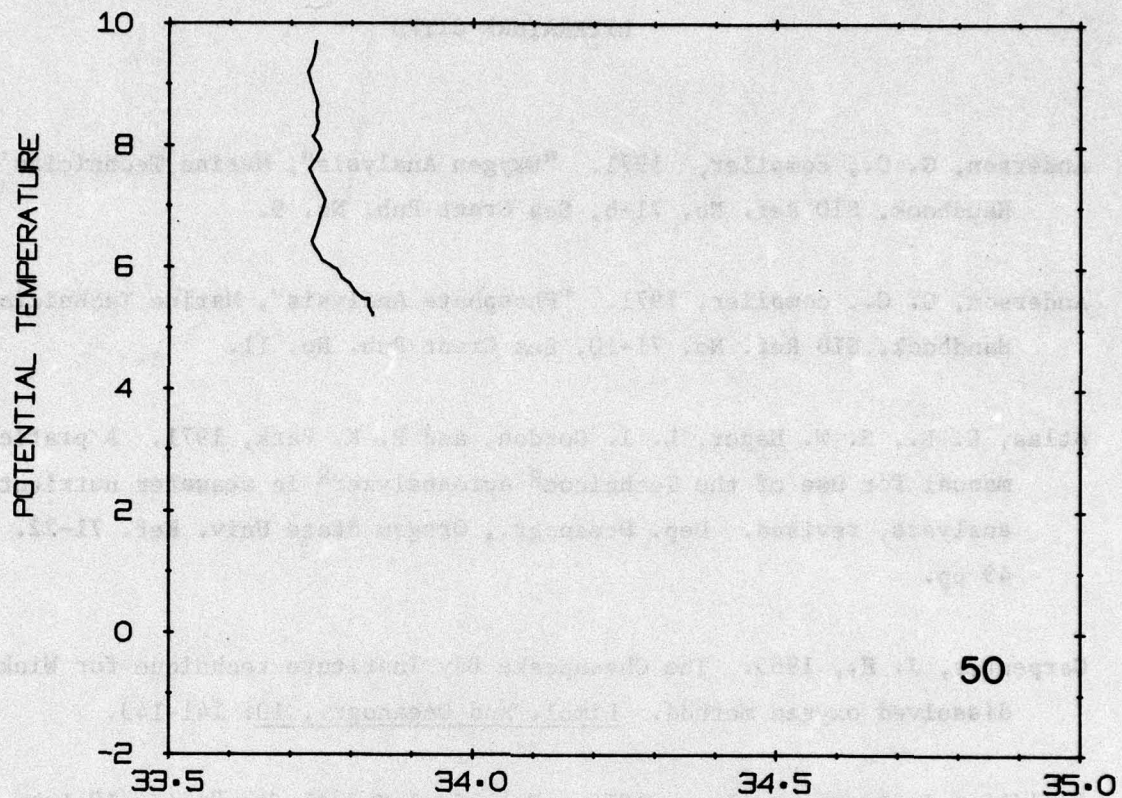
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